

ECONOMICS

FOR HIGH SCHOOLS AND ACADEMIES

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PREFACE

THE public high school has become a people's college whose chief purpose is the preparation for citizenship. As the politics of the modern state has much to do with economics, no one could have an ordinary preparation for citizenship without at least a foundation in the elementary principles of the science of economics. Many educators have urged that the subject is too difficult for the secondary school curriculum, and therefore it should be reserved for university work. It is, however, the experience and observation of the writer of the present volume that economics, if properly presented, is as readily handled as any other subject found in the senior year of the well-equipped high school. Moreover, because only a small number of their graduates continue work in the university, it is essential that it be taught, if the school is to fulfill its great purpose of preparing its pupils for citizenship. True it is that the science of economics cannot be mastered in the high school; but what subject is mastered there? It is a mistake to exclude those subjects from instruction which are best calculated to prepare for citizenship and the conduct of life. Especially is the study of economics at the present time fitted to awaken the interest of young men in public affairs and to cause them to retain their interest in high

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school work, preventing them from leaving the school to engage in business.

The present volume represents the elements of the science simply stated. Abstract theories and discussions have been avoided, while the workings of industrial society have been emphasized. With these purposes in view, the first part of the book is devoted to a brief survey of the evolution of industrial society, and the second part gives the ordinary principles of economics in their simplest form with their application to modern industrial society. The last part treats of the relation of private economics to public economics and of the government control of industries.

The author is indebted to Professor A. J. Boynton for assistance in reading the manuscript of this book.

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BOOK FIRST
INDUSTRIAL EVOLUTION

CHAPTER I

PRIMITIVE INDUSTRIAL RELATIONS

1. Occupations of Primitive Man. —The use of the term “ primitive man ” in this connection refers to man in the first stages of industrial development, rather than to priority of existence. Therefore it may be used in connection with one of the natural races like the Indians of North America, or the Kaffirs of Africa, as well as in reference to the cave dwellers or lake dwellers of Europe. Clearly, it is the stage of industrial progress rather than the time man has been on the earth that concerns us. Hence those groups of mankind that have made a small beginning in the industrial arts and industrial life in general may be considered primitive men, whether they rank chronologically as the first of whom we have any record or as those apparently more recent races that still exist under primitive economic conditions.

In the early period of development, man spent nearly all of his time in obtaining food to sustain life, making a few implements for use in the chase or for domestic purposes, making ornaments for decorating the body, and providing scant clothing for its protection and meager shelter from sun and storm. The rude implements with which he worked caused him to spend nearly all his time to preserve his existence. Considering his struggle with

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the beasts of the forests and the elements of nature, his scanty food supply and poor protection from the elements, his lack of medical science, and deficiency in inventive power, is it not a marvel that he survived at all and reached the high state of culture of modern civilization? At best his life was meager until he could, by industrial progress, acquire wealth and leisure. Even then his industrial life was unfolded by slow and painful steps.

2. Methods of obtaining Food. — The food of primitive man was at first largely vegetable, consisting of berries and fruits from shrubs and trees, of leaves and bark of trees, or of roots dug from the ground. In tropical climates there were many fruits of native trees, such as the bread fruit, banana, and products of the palms, which gave an abundance during certain seasons of the year. The introduction of animal food enlarged his supply and gave greater variety of life. There are evidences of the use of animal food among the earliest records of the race. Among the relics of the cave man of Europe are long bones which have been split open for the marrow, and other indications of the use of animal food. No doubt, the reindeer served men, as it now does farther north, as means of clothing, food, and for other domestic purposes. In the ancient shell mounds along the North Sea are evidences of the extensive use of shellfish for food.

As the food was usually uncooked, large animals such as the whale, the bear, and the reindeer would be eaten in a state of decay. In such cases the tribe or group assembled at intervals at the repast.

Among the North American Indians, animal diet was more extensively used than vegetable, although maize was

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cultivated in a limited way by most tribes. Wild rice was regularly harvested by a number of tribes in different parts of the United States, especially those of the upper lakes. Acorns and pine nuts were staple articles of food for certain California tribes. In the early period, the tribes gathered only the seeds and fruits which nature spontaneously provided. Subsequently, they learned to till the soil in an imperfect way. This tillage became quite universal among the natural races, in warm as well as in temperate climates. In some regions, the principal diet was vegetable, supplemented by animal food; in other regions it was animal diet supplemented by vegetable food. Whenever tribes were in proximity to the sea, fish and shellfish were used to a great extent. Sometimes tribes would travel a long distance to the ocean or to a lake or a river to obtain fish in the season. A very good example of this is the assemblage of the tribes annually on the banks of the Columbia River to take the salmon as they ascend the stream. The taking of fish caused great effort on the part of primitive people and added to their variety of occupation. They became skilled in fishing, or hunting large and small game, and in agricultural pursuits, which not only enlarged their food supply but increased their inventive powers.

3. The Production of Clothing. — Primarily, clothing was used for ornamentation of the body rather than as a protection from cold, and, except among tribes like the Esquimaux, who lived in a cold climate, it was of much less importance than the procuring of food. Yet clothing had an important industrial significance. The use of bark and leaves of trees and fibers of plants brought forth

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methods of weaving or plating, and caused great exertion in procuring the necessary material. Whenever man lived largely by the chase, the use of furs and skins for clothing was nearly universal. The tanning of these became a great industry and they early became of staple value. In many instances the spinning, weaving, and the coloring of garments occupied much of the time of certain members of the tribe. The methods of spinning and weaving were very crude. In spinning the method of rolling the spindle on the knee was generally used. The loom consisted of vertical lines, or the "warp," attached to a horizontal limb or bar, and a corresponding bar on the ground. A stick was used to insert the thread or yarn, and another stick was used to force the thread down between the vertical strings. Prior to this method of weaving, the plaiting of rushes and coarse fibers for clothing and rugs was common. Also, the weaving of baskets probably preceded the weaving of cloth.

4. The Method of building Houses. — The housing of primitive folk was at first rather accidental. Caves, protecting rocks, or trees furnished natural shelters. Sometimes shelters were constructed of branches of trees and leaves, or the bark and branches of trees were leaned against the fallen trunk. Subsequently, the framework of poles was covered with bark or brush, or with the skins of animals, or sometimes with earth. The house-building industry was of the most temporary and general nature. Yet it varied greatly in different tribes, chiefly on account of the nature of climate and the variety of material at hand. Also, the habits of life of the natives had something to do with the nature of housing. Thus, the Indians of

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the buffalo plains constructed their houses of poles, arranged in the shape of a cone, and covered them with the skins of animals. These were readily portable and the house could be easily moved from place to place. In other places, under different conditions, natives would build their houses of stones, and in highly developed tribes, of dressed rock. In New Mexico, the Pueblo Indians built their houses of adobe bricks which, in a dry climate, were very durable. Again, in the South Sea Islands and Africa and South America, the natives frequently built their houses in trees or on high poles so as to escape dampness, wild animals, and reptiles. There is no evidence of a distinct commercial interest in house material or in house building. Each tribe adapted itself to the conditions and used the material most easily obtainable.

5. The Manufacture of Ornaments. — One of the early occupations of primitive people which consumed much time was the manufacture of ornaments, for personal adornment was a characteristic of all primitive peoples. It early took the form of tattooing or painting of the body. Subsequently, ornaments of shells, bones, teeth of wild animals, and woven ornaments of fiber, reeds, and rushes were common. Chronologically, the ornamentation of the body preceded the use of clothing. The latter was but an evolution of the former. Earrings, necklaces, amulets, nose rings, bells, and other ornaments were worked out with much care. For religious ceremonies, dances, etc., many articles of ornament and dress were especially constructed. Because of the lack of skill, it cost many months of labor to make some of the more elaborate ornaments for the body.

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6. The Manufacture of Implements and Utensils. — The implements of war, such as the spear, the bow and arrow, the war club, and the battle-ax, became so necessary and were used to such an extent as to require great skill and labor. The utensils for preparing food, others for skinning animals and for scraping hides, hoes and spades for agriculture, and hammers and sledges for building gave opportunity for work. This manufacture taught man skill with his hand, invention of the brain, and trained his nature to continuous effort.

7. The Division of Labor. — It is difficult to conceive of a social state in which every one did everything for himself. Such a state would preclude the division of labor. Each would find his own shelter, procure his own clothing and food, and fight his own battles against nature and with man. Many animal groups have a greater coöperation than this. However, the history of mankind reveals many social groups in which there was very little coöperation and very little division of labor. So dependent was each individual in procuring his own food, it might be inferred that in the earliest stages no concerted action existed in obtaining food. In the order of development, the division of labor was primarily between the sexes. Even now, among the lowest natural races, this is the usual form. Thus, among the Adamans the men hunt pigs, catch fish, make the canoes, implements, and weapons; the women supply the firewood, cook the food, catch shell-fish and sometimes other fish, make baskets, nets, paddles for boats, and shave the men. Among the Fuegians, the men procure most of the food, conduct all hunting and warlike expeditions, procure building material, and train

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the dogs. The women keep the fire, make baskets and fishing lines, gather shellfish, and care for the canoes. They usually paddle the men about in the canoes and perform other drudgery.

In general, it may be said that among the natural races, man does most of the hunting, fishing, and fighting, and to a great extent obtains fuel and building material. The women do the basket work, weaving, and plaiting, care for the fire, and perform the cooking. Yet this varies in different tribes. Whenever agriculture is started, it is generally performed by the women. They also tan the hides and make the clothing. In nearly every natural race, the women carry the burdens and do the drudgery, for the condition of woman is a species of slavery.

Among some of the natural races, the division of labor among the men is quite marked. For example, the men of the Fuegians divide the work of the chase; among the Fijians there is a distinct class of pig drivers, and among the Sandwich Islanders there are house carpenters, canoe builders, fishermen, and farmers. There are two classes among the women: a superior class that performs the light indoor work, and the lower class, occupied in agriculture and general drudgery.

As the industries became more diversified, the division of labor became more and more marked among the barbarous tribes. Trading was not common within the tribe, but traders went from tribe to tribe to exchange surplus wares. Especially was this common when occupation was specialized in different tribes. Thus, one tribe became noted as basket makers, implement makers, or makers of special kinds of implements which became articles of

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commerce between the tribes. One tribe in the Samoan Islands is skilled in making canoes, another in making mats, while in the interior, in proximity to the raw material, the inhabitants make nets. Some tribes of the American Indians were skilled in making arrowheads, knives, and hatchets of flint which were swapped with other tribes with whom they were friendly.

The earliest records of the civilized nations of the world indicate that division of labor existed to a considerable extent. However, if their pre-historic life could be known, it would reveal a simple primitive life in which division of labor did not exist in a marked degree. Among the natural races, the priest and medicine man were well-defined characters. In the more advanced tribe and in the primitive life among the historical nations, classes of people such as soldiers, agricultural laborers, shepherds, and priests were distinctly marked. Thus, in the development of the social life, division of service began to appear at an early time. Whenever social order of any kind appeared, there were special persons to maintain it in a variety of ways.

8. An Artisan Class. — In many of the highly developed natural groups there was a more or less distinct artisan class. Boats, bows and arrows, stone, bronze, and iron implements were made by individuals who devoted much of their time to one or more of these industries. In some instances, house builders with special knowledge of material and structure existed. Usually this was a family affair rather than a tribal occupation. Indeed, it may be said that the family group worked as a whole in any given industry, the one most convenient for them, without specially trained artisans. Yet, as some individuals

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showed more skill than others in a certain occupation, it could not have been otherwise, when industries were varied, that labor became specialized. However, individual skill must have been early recognized among members of a tribe in the working up of raw material. Some worked at one occupation more continuously than at others, although they may have been more or less acquainted with all the occupations of the group. Among the negroes of Africa the work with iron at the forge is a specialized occupation, although it doubtless was of Semitic or Hamitic origin as the influence of these two races extended throughout Africa. Travelers report that in the South Sea Islands there is specialized labor, where wood carriers, shoemakers, and carpenters exist. It is possible that this report is merely an observation that different individuals were engaged in those occupations at the same time.

9. The Care of Stock. — The domestication of animals marks a stage of economic progress. At first the utility of domesticated animals was not great. This was discovered by degrees. The dog, for instance, is the most universal of domesticated animals, but usually he is a pet and a companion. Next to the dog, the domestic hen exceeds all animals in its universality. Cattle are found among the valleys and in East Africa; the goat is found in Africa, the pig in Polynesia, the turkey in America, and the llama in South America; yet, among all natural races the service of animals for food or work was comparatively small, for they had not yet learned the art of their best use. After the domestication of animals, the herding of stock became a special occupation. While there are few instances of this among the natural races, yet among the

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early civilized races herding was one of the distinct occupations, especially after formal agriculture began.

10. The Beginning of Agriculture. — It is not known how agriculture first began among the tribes. Tilling of the soil in many districts doubtless preceded the domestication of animals. The traditions of tribes relate how the gods were supposed to sow the seeds of grasses and plant the fruit trees for the benefit of man. In due course of time, according to theory, by supernatural help or agency, man learned to sow and to plant and to reap a harvest. Agriculture at first was tentative, being carried on by semi-nomadic tribes. Subsequently, when a tribe would permanently settle in a valley and engage in agricultural pursuits, the land was owned in common, as the possession of the whole tribe. The village community was an out-growth of this system of landholding. The arable land was divided into lots and the head of each household was allowed to till a lot in accordance with the rule of the tribe. Each family was allowed a house lot for his permanent habitation. A common woodland, where each had the right to use the timber, and a common pasture land adjoined the village. But only the beginnings of this system can be found in natural races, hence there are striking contrasts to this community system of agriculture among the natural races. Thus, in Java, each cultivator owned and managed his own farm, the women of the household usually doing the farm work. This was the period of "hoe-culture" which preceded the domestication of animals and formal agriculture. Among the tribes of the American race, agriculture was carried on as an adjunct to hunting, to furnish a food supply of maize. Yet, in most instances,

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it appears to be a tribal action. At least, the property of the family group was not clearly defined. Of the two methods of tillage, it is difficult to determine which was the original, although both were carried on together in many instances. It would seem that, excepting hoe-culture, individual farming would have been the first attempt, and that subsequently the tribe found it necessary to establish rules for the cultivation of the soil which would be consistent with the community interests. But as the real object was to increase the food supply, it is easy to see that individual rights could not supersede tribal interests. As no primitive people devoted themselves to agriculture alone, but had a diversity of occupations, it must have increased the means of employment of labor.

11. Trading and Transportation.—The diversity of production in different territories gave rise to an exchange of commodities. Of the islands of New Caledonia, some were noted for the manufacture of hatchets, some for war clubs, others for stone implements, and still others for weapons. An active trade sprang up among these islands, which formed the elements of commerce. Traders passed from tribe to tribe to peddle wares. However, this was limited in comparison with other occupations, although trading of furs was common with some tribes. It was customary for a tribe to excel in the industry near at hand. Thus, some tribes excelled in pottery when in proximity to clay beds and forced by necessity to procure utensils; others, in proximity to reeds and rushes, became basket makers, while others were workers in stone implements because of their location near beds of chert or flint. There was a limited amount of "swapping" of articles between

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the tribes. Within the tribe property was held in common to a great extent, which made a method of appropriating or borrowing, but it did not partake of the nature of modern trade. After individual ownership prevailed, there was a superstition about individual possessions which was not conducive to trade among members of the tribe. So strong was this notion of the personality of tools and implements that they were usually buried with the owner at his death.

Transportation was late in developing. Whenever goods had to be transported, they were either carried by men and women, more often the latter, or on the backs of domestic animals or by canoes. There was very little systematic trading and consequently little formal transportation in primitive tribes. After diversified industries sprang up, wealth was created and surplus articles were made for the purpose of exchange. The caravans of the East were used for transporting goods. At first these were conducted by the merchants, but subsequently they became common carriers.

12. The Ownership of Property.—The modern economic system depends primarily upon the individual ownership of property. It is difficult to determine just when and how individual ownership originated. Doubtless, like all other forms of social rights, it came about gradually. During the nomadic state, while the family group worked together, and as they traveled from place to place, it is easy to see that the idea of private property must have arisen in regard to wearing apparel and possibly household articles. It is evident that the idea must have occurred by original possession. The individuals who were foremost in the hunt were apt to claim a larger

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proportion of the reward. The person who worked for weeks or months on a stone implement would naturally claim a right to it, and other members of the tribe would probably concede the claim. One can conceive of the interchange of implements and clothing quite indiscriminately in some primitive tribes, but as social custom became crystallized, individual right to property became more clearly defined. In the family group of the American Indians each member of the household has his own private possessions, although in a general way they are the property of the tribe. It is evident that the wandering horde or tribe had no conception of ownership of the soil. Possession maintained by struggle with other tribes was as far as land tenure extended. After the village community became established, a well-defined ownership was vested in the public. The individual had the right to the use of a certain portion of the land, as determined by representatives of the whole community. However, at a very early stage of the communal holding of land, the small family group had the right to the house lot on which his cabin was built. This right became inalienable.

Subsequently, when the village community disintegrated, and society shifted from the ethnic to the demotic stage, the individual began to hold the land in his own right. Originally, the question of ownership was determined by might, but as time wore on custom prevailed and ruled.

13. Irregular Development of Economic Life. — The student should be cautioned against assuming too much in regard to the formal development of industrial society. Indeed, its development was all very irregular. While in general human society must have passed through a few

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universal stages of progress, there were many exceptions to the rule, and great variety prevailed everywhere. The variety of occupations of the tribes in accordance with their environment or their necessity and the irregularity of progress made uniformity of development impossible. Many tribes missed some of the steps of progress. For instance, the so-called "pastoral stage" of human development, emphasized by many writers, was not universal. This stage was founded on the domestication of animals. As the area occupied by the animals which were domesticated was comparatively small, pastoral development could only occur in proportion to the occurrence of these animals. The ox, the horse, the mule, the goat, the ass, the elephant, and the camel in the Old World gave rise to the economic condition of industry which emphasized this special period of development of pastoral pursuits. In the New World, the llama of South America being the only domestic animal, it is evident that there was no real pastoral period in the progress of these races. Yet there are evidences of advancement in their civilization equal to that in other lands. The making of adobe brick and the building of permanent buildings, the cultivation of the soil and the practice of irrigation, indicate a stage of development equal to that of the Old World at the period of the domestication of animals. Also, as was pointed out, there were two phases of agriculture: the first was merely the hoe-culture of primitive times, carried on principally by the women; the latter was a more formal agriculture, in which the use of implements by man and later animal power prevailed. Finally steam power was introduced.

Nor can it be inferred that all tribes passed through the

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village community stage of landholding, though among the Aryans and their descendants the pastoral stage and the community stage of landholding are very clearly marked. Another point which should be carefully observed is that migration, hunting, and fishing continued after agriculture developed, and that agriculture continued to develop long after the industrial and commercial stages were well along. Economic industry is cumulative, and while in a given period one mode may predominate, former industries are continued under different forms.

The only logical and continuous method of discussion is to take up a single industry, like agriculture, and follow it through the hoe-culture system to the cultivation by animal power and steam power, studying the various changes in development, and discussing in the same manner the use of animals, implements, and building. After following the development of each separate industry in this manner, a comparative development may be presented. Whatever method of study is employed, a common conclusion will be reached; namely, that the industrial arts progressed by slow degrees, and that thousands of years passed while man was learning the meager elements of industrial life.

REFERENCES.—Bücher, Carl, "Industrial Evolution," pp. 1-182; Ely, Richard T., "The Evolution of Industrial Society," pp. 1-66; Tacitus, "Germania"; Deniker, J., "The Races of Man," pp. 144-197 and pp. 244-280.

CHAPTER II

EARLY FAMILY INDUSTRY

14. **Beginnings of Economy.** — As the family was the first organized social unit, it was within its precincts that the first specialization of industry occurred. The early organization of industry proceeded with the development of the family life. Hence we must look for the beginnings of economy in the coöperation of the family group. But the transition from the economic state, in which prevailed the individual search for food, to the coöperative life of the family group, in which each had an interest in the survival of the group, was very gradual. It is marked by the slow accumulation of personal property. This was seriously interfered with by superstition which required the burial of all personal property with the dead. It was believed that the implements made and used by the individual, as well as his clothing, were a part of his personality and should go with him to the grave. But gradually there came the custom of laying by stores of goods, the building of common houses, boats, and larger implements by the coöperative work of the members of the group. This gave rise to two distinct classes of property, individual and family. Later, as the family enlarged into the tribe, a third class of collective property appeared. These classes were founded on the mode of production. When the indi-

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vidual made a stone arrowhead, or hatchet, or a garment with his own labor, or whenever he received such property by gift, it belonged to the family. In case, where larger groups engaged in hunting, the captured whale or buffalo was collective property and was divided among the families or individuals in the hunt. The division of goods thus acquired was based upon the proportional amount of labor contributed. While these practices indicate a certain economy of labor and of goods, the economy of time among natural races seems to have been deficient.

Two important customs, that of "taboo" and that of "totem," had much influence in determining economic production and use. The former is an expression of public opinion as given forth by elders, chiefs, or priests, declaring against certain objects and forbidding their use. Thus the taboo is used by the Polynesians, forbidding the use of yams, bananas, or chickens in time of scarcity. For similar reasons the eating of the emu is forbidden by Australians to the young before they are initiated into the society of the tribe at the beginning of manhood. The totem is a representative of family unity and is also a symbol of religious sanction. It is used in connection with some objects for which the members of the tribe have a special veneration and superstition. The sign of the totem is attached to all property belonging to the family or tribe. Hence it becomes a symbol of unity for the group and a badge of ownership. In civilized life we have an expression of the same idea in the coat of arms, the fraternity or class pin, and in demographic society in the flag or banner. The totem and the taboo have a great variety of uses, the discussion of which cannot be entered

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into here. It is only the economic significance of limiting consumption, as seen in communal possession, that concerns us.

It is only among the more advanced natural races that the beginnings of economy of goods are observed, such as the Pueblo Indians, the Iroquois, and some of the tribes of Africa and Asia. Also among the nomadic tribes of Asia family industry became, to a certain extent, economized. However, it was only when the family life became thoroughly unified, as in the Egyptians, Babylonians, Greeks, and Romans, that industrial customs became regular. Indeed, it was not until a permanent attachment to the soil took place that a truly systematized industry became established and industrial life settled and permanent. The land then belongs to the tribe, communal property is permanent, and coöperative industry prevails in caring for it and maintaining it.

15. Ancient Family Life. — Perhaps the Greek, the Roman, and the Hebrew were the best types of the ancient family in races that became highly civilized, although the Teutonic family closely resembled these. The early family organization existed in lieu of all political organization, and as a group it represents an economic unit. The organization of economic life followed the development of the family. Among the more advanced natural races, like the Iroquois, the Aztecs, the Pueblos, a few of the advanced tribes of Africa, and the nomadic tribes of Asia, family industry became somewhat systematized and specialized. However, it is only when the family organization has become unified and developed in such advanced races as the Greeks and Romans, or the more ancient nations,

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such as the Hebrews, Egyptians, and Babylonians, that industrial practices become regular. In such family groups the independent individual struggle for existence passes into a household economy, in which the maintenance of the group is the end sought and which determines the process of industry. Things begin to be economized, individual ownership of personal property alone prevails, and each individual member works for the good of the family. The transition from the individual to the group system brings forth economy of work. The product of individual exertion was an advantage to the group for the time being, yet a longer time must exist before the wealth was cumulative, owing to the fact that through superstition an individual's personal property was buried with him in the grave. Nor did one family work for another family, for each was a self-sufficient economic unit. Individuals worked primarily for themselves, but in the developed family group a division of labor appeared. The line of distinction between occupations was drawn closely between the sexes. The work of the household was to satisfy the wants of its several members. Production, distribution, and consumption represented a continuous economic process all within the household. Yet, to a great extent, every one labored for himself. His wage was the actual product of his own toil. In modern industrial practices we have had nothing like this, for the modern family is far different in its organization from the ancient. The ancient family represented the political as well as the industrial unit. Thus, in the settlement of the lands of the United States a family frequently depended upon itself for its food, clothing, implements, and furniture,

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most of the articles of consumption being "home-made." Likewise, the colonial family of America was self-supporting to a large extent. Household industry satisfied the wants of the members of the family.

It occasionally occurs in modern times that within the larger political and industrial unit, family industry resembles that of the ancient family. In the South, the old plantations were to a great extent independent economic units, with slave labor. It is true that the main products of tobacco or cotton sought a market outside the household and articles were imported from outside countries or furnished from domestic manufacturers within the nation.

The pastoral families of the early Hebrews, before the slavery in Egypt, as represented by Abraham, Isaac, and Jacob, are of the self-sufficient type. The chief occupation was the care of flocks and herds. However, there is evidence of a variety of industries and a partial division of labor. Moreover, wearing apparel and other articles consumed in the home were in part acquired from outside sources.

| 16. **The Enlarged Family.** —The ancient family expanded into the gens, or tribe, and still maintained its industrial independence. Primarily, very little exchange of products took place with other tribes. Even when it occurred, it was in the form of barter. But within the expanded family a division of labor was more fully developed. Some went to the field to till the soil and harvest the crops, some went to the loom to weave or to the distaff to spin, while others were engaged in making implements and still others cared for the flocks and the herds. Yet, in

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all this community life each continued to labor for himself, although there was little exchange of goods or services, and the common product belonged alike to all.

The enlarged family group was formed by the union of a common household of several generations of blood, who owned all property in common and enjoyed the products of a common industry. If a new household was set up by the marriage of a pair, it became part of the integral family. It could not settle by itself and carry on an independent existence, because there was no protection for person or property outside of the family group. As time went on the number of the household was increased by adoption of members of other tribes, although this method was limited in its scope until after the introduction of slavery. The group became localized, and all who dwelt within a given territorial boundary belonged to the industrial family whether they were related by blood or not.

Subsequently, as the tribal unity declined, the separate household gained power and the old tribal organization became a general protective association, looking after the new common interests of the groups of households. Such work as clearing forests, building ships, guarding fields, or other general public affairs were conducted by a group of workers contributed from the whole community. But the task was a general coöperation, much the same as occurred in the early rural communities in the United States, when "house raising" and "log rolling" were participated in by all the neighbors, or when corn-husking "bees" were common for the harvesting of the crops of those who were unable to do for themselves.

17. The Introduction of Slavery.—When slavery was

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introduced, a new social order appeared in the family. The head of the family became the master of the slaves, to each of whom specific duties were assigned. This is best exemplified in the Roman family, in which a large number of groups of workers under the direction of the head of the family engaged in industrial pursuits. There were two main groups: those who tilled the soil and carried on the productive industries, and those who administered to the affairs of the household. Of the former Bücher says: "On every large country estate there are a manager and an assistant manager with a staff of overseers and taskmasters, who in turn have under them a considerable company of field laborers and vine dressers, shepherds and tenders of cattle, kitchen and house servants, women spinners, male and female weavers, fullers, tailors, carpenters, joiners, smiths, workers in metal and in the occupations connected with agriculture. On the larger estates, each group of laborers is again divided into bands of ten each (*decuriae*) in charge of a leader or driver (*decurio*)."
("Industrial Evolution," p. 99.)

In the second group are the administrative officials, such as superintendent of the revenue, with his treasurer, bookkeepers, maids, valets, caretakers of property, stewards, and those devoted to the amusement of guests. The family is thus self-sufficient, and represents a small though complete industrial world. Its members are engaged in producing goods for their own consumption. It is easy to see how the small landholder could not thrive in competition with the large landholder, with his multitude of slaves for every occupation. The Roman family on the

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estate contains the essential elements of the later feudal family group of the Middle Ages. Indeed, it is in the industrial system of Rome that we find the basis for the feudal system.

18. Consumer's Economy. — While the organization of a large Roman family with slave labor represented, in a measure, all of the elements of a national economy, for the whole aim of this extended household was to supply the wants of its members through slave labor, it had a distinct economic existence. There was no need of trade, barter, or commerce. Its whole economy was to supply wants by the labor of its own members, independently of every other household. It was a consumer's economy, in which all labor was directed toward the production of those articles needed in daily consumption. No attempt was made to create surplus goods for the market, hence all labor was apportioned and directed according to immediate needs.

19. Beginnings of State Economy. — So long as society rested entirely on an ethnic basis, household economy represented the whole economic life; but with the beginnings of the modern state, there occurred elemental forms of national economy which gradually multiplied and expanded with the growth of the state. For a long time in Greece and Rome the family economy existed side by side with state economy, the latter involving the political method of control. Slavery, as in the household economy, was the all-important factor that characterized the life of the state. Public roads and aqueducts were built by slaves and the public quarries and mines were worked by them. Likewise, many public services were performed

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by slaves, such as the building and cleaning of streets and sewers, the dispensing of charity, the sacrificial service of the temples, and the attendance upon public officials. The food and raiment of such slaves were furnished from public funds, arising from the products of the public domain, or in the form of tribute of provisions or fees collected by the state. But slavery, want of freedom of competition, and the independent relation of the individual to the whole community prevented the growth of economic life as it exists in modern times.

In Greece and Rome manufacturing and trading were made subordinate to agriculture. Religion and philosophy both taught that industry other than agriculture was degrading. Moreover, those nations were usually distracted by war conditions, which prevented a normal growth of competitive industry which might otherwise have arisen. However, the writings of Plato, Aristotle, and Xenophon give evidence of the existence of different departments of industrial life and a division of labor in Greece, as ethnic society gave way to demographic society. Likewise Cicero, Pliny, Seneca, and other writers on agriculture exhibit the same conditions in Rome. Yet in each country agriculture was the great industry, much praised in contrast with trade and manufactures, and the practice of slavery characterized the whole economic life.

The Oriental states, as they passed from the ethnic to a demographic basis, developed peculiar characteristics. As in Greece and Rome, agriculture was praised in contrast with commerce and the industrial arts. But the division of labor was carried to excess, although it was so

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influenced by religious superstition as to degenerate into an hereditary caste. Free labor became unknown, and the whole system of ancient customs crystallized into a non-progressive economic life.

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CHAPTER III

EARLY MEDIÆVAL ORGANIZATION

20. Rise of Feudal Society. — The decline of the Greek and Roman systems of industry founded chiefly on agriculture and slavery, with the self-sufficient family group on the estate or plantation, made way for a new system called “feudal.” The elements of the feudal system were found in the methods of managing the Roman estates. These elements, joined to the Teutonic method of political organization, brought about the mediæval system. In England, however, the early mediæval organization was more Teutonic than Roman, prior to the invasion of the Normans in the eleventh century. On the Continent society became completely feudalized and all industry was subjected to the conventional usages of the system. The feudal régime was constructed from the over-lord to the serf, while in England a mild form of feudalism was developing before the feudalization of the nation by the Normans. Yet as there is more regularity in the development of industrial organization in England, the following discussion will refer more especially to England and subsequently to the United States, although the conditions in Germany and other states of Europe will not be passed unnoticed.

21. Economic Organization founded on the Prevailing Land System. — All political and industrial organization

of a permanent character rests upon the manner in which the land is held and used. The village community, with its communal landholding, necessitated a particular view of property rights and inaugurated a special kind of industry. We have just noticed the effect of great estates and slave labor on the industries of Rome. The expansion of the Roman self-sufficient family brought about the transition to the feudal system. It was a new method of landholding, which grouped all industries about the land, made them subordinate to the tillage of the soil, and arranged all people in industrial classes. Each man had his place as either lord or vassal. So definitely wrought out was the system that such a thing as economic freedom was unknown, hence all economic or industrial enterprises were limited.

22. The Manorial System. — In general the manorial method of land cultivation was the village system, in which a small number of people gathered in a village and tilled the adjacent land which usually belonged to the lord of the manor. The land was divided into small strips, and each individual or family held or owned one or more of these small strips, ranging in size from one to thirty acres. These strips of land held by the individual were seldom continuous, but were frequently located in different parts of the territory, sometimes some distance apart. Generally the title to the land was in the lord of the manor, who granted to the holders the right of tillage and imposed certain duties and obligations on the farmers for the privilege of holding and cultivating the soil. Usually in each village was located the manor house, in which the real proprietor of the soil or his agent resided. The farmers were obliged

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to assist the lord in the harvesting of his crop and to pay a certain part of the product of their own land to him for its use. The products of each rural district were sufficient to supply its needs of food and clothing, so that the whole country was made up of independent communities, with little exchange between them. Indeed, the implements and utensils of farm and household were nearly all made within the community, which became practically self-sufficient.

23. Classes of Laborers. — The successor to the slave was the villein, or serf, who was a mere clod attached to the soil, and had no freedom of action. He could not leave the manor, sell live stock from the land, or even give in marriage his own daughters, without the consent of the lord. Usually there was a fee to be paid in each transaction that he made. On an average he devoted half his time to the service of the lord, for which no compensation was received, and the remainder of his time was spent in working the land to obtain subsistence and the surplus necessary to pay the excessive taxes levied by his lord. His condition was practically no better than that of the slave, for while he was not bought and sold in the market, yet in the transfer of land he went with the land. A glimpse of freedom and the partial control of his time may have afforded him a little consolation which did not come to the slave, yet all he had, went to his master in one form or another, which made his condition practically that of slavery.

The local agent of each manorial estate for the lord was called a bailiff. He had entire supervision of the work on the manor and estate and saw that the services of the

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tenants were performed, that they paid their taxes and did the required work of sowing and harvesting on the lord's land. He inspected all fields and pastures and directed all details of the work. In conjunction with him was the reeve, who was selected by the tenants from among their own number. In a measure, he was the representative of the tenants and doubtless saw that a certain amount of justice was accorded them.

Over and above these two officers was the steward, who lived in the manor and represented the lord as his superintendent, and settled the questions of service, market, and rents. He was frequently the superintendent of many manors. To a certain extent, the bailiff and the reeve were under his direction and supervision.

24. Division of Labor. — In this period the division of labor was not fully accomplished, but the tenants had a variety of work, although the industries were very meager. Each manor was, in itself, self-sufficient and independent, and hence attempted to produce sufficient for its own consumption and no more. Wherever small towns sprang up, they also became the centers of self-existing systems. Each tenant procured his own firewood, or conjointly with his fellows obtained timber from the forest and built his own dwelling. The skins of slaughtered animals were dressed by each for his own use. The simple clothing of the villagers was made in their own cabins from woolen or linen cloth of their own weaving. Perhaps the most distinctive worker was the village smith. His chief occupation was keeping the irons of the village plows sharpened or repaired, and, in fact, he did all the ironwork of the tenant family. Closely allied to him was the carpenter,

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whose chief occupation was the making and repairing of the plows, harrows, and other farm implements. It is true that they were often tenant farmers in addition to this, but they approached more nearly to the type of independent artisan than any other laborers in the village or about the manor. As time went on, industries became more specialized, and they became independent artisans and spent all of their time at their own occupation.

After the towns began to spring up, the desires of the inhabitants became more diversified and a larger number of manufactured articles came into use. Industrial pursuits became specialized. Thus the carpenter and smith, who at first were tenant farmers, finally came to be independent tradesmen. In like manner weavers, dyers, fullers, butchers, bakers, saddlers, helmetmakers, spurriers, plumbers, bricklayers, and cordmakers followed their several separate occupations. While these groups became more and more distinct, still it is true that each household continued to manufacture nearly all of the goods required for its own consumption. In addition to this, in each manor were clergymen who were also architects, teachers, and lawyers, and sometimes men of letters; and a large group of servants, but here, as elsewhere, serving was not their exclusive business. They had other independent duties to perform. As transportation had not yet appeared to any great extent, men walked or rode, and carried their own bundles. While all classes were, in a nature, bound irrevocably to the life they were leading, there was a freedom and independence about this simple life which did not appear in the more complex society. The individual, the family or community, represented a small world inde-

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pendent of other small worlds and of the great aggregation of the population.

25. Commerce. — In the period represented in the foregoing section, there was very little trading, and this was carried on mostly by foreigners. But as the community became thoroughly developed, certain products of other countries were brought in by pack peddlers or traders, who bartered them for other goods of the tenants' manufacture, or as money came into use they occasionally sold for cash. However, there was no distinct trading group or merchant class. As the villages were developed to considerable size, open air markets were held once a week. This gave to individuals an opportunity to exchange their goods. It is interesting to note that this custom prevails to this day, in some form or another, in all the towns of our Western civilization. More frequently, in modern times, the goods are exchanged for money; but there are a number of instances where the farmer brings his goods to the grocery for exchange. However, there was no transporting group, and hence no commerce in the real sense of the word. Each man carried his own goods or his own pack and looked out for his own conveyances.

26. Industry. — The groups of laborers are indicative of the industry of the time. Mr. Bücher outlines five main systems of industry arranged as follows: (1) house work, or, as it is called by some, domestic work; (2) wage work; (3) handcraft; (4) commission work, which was a form of house industry; and (5) factory work. House work refers to the production of economic goods in the house for the consumption of the household, from raw materials furnished by the house, all production being

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regulated by the needs of the household. There is no exchange, no circulation of goods, no money, and but little capital. The wealth of the household consists of consumption goods, such as food products, clothing, utensils, and furniture.

As a rule house work is older than agriculture, as many primitive tribes have adopted the former who know not the latter. The sedentary Indians of New Mexico and Arizona have developed skill in working pottery and baskets and in weaving blankets and garments. It is true that some of them have engaged in hoe-culture in a meager way, but house work by far exceeds every other form of industry. The Indians of the Northwest coast are skilled in making boats, baskets, and implements of bone and horn. The tribes of Africa are expert in wood carving and weaving, and in some tribes in ironwork. Indeed in all primitive industry, house work is the prevailing type.

Among the early Greeks and Romans house work was a prominent form of industry after the formal beginning of agriculture. In the states of Germany, Norway, and Switzerland, house work continues to be prominent to this day. In the United States, it has gradually declined until the weaving, spinning, and even the baking and making of garments, and to a certain extent, the cooking, is done outside of the household. But before the decline of house work, it reached a stage in which not all goods were manufactured for household consumption. Goods were made to sell to others outside of the house. Even to this day, in many instances, goods of home production are carried to the weekly markets to be disposed of. And it is possible

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that with the revival of industrial education there may be a revival of house work industry.

27. The Wage-work System. — Following in the natural order of development, the wage-work system appeared. But it was not like the modern wage system, for the wage-worker went from house to house. During his stay in a house his board and lodging were given him; and when he was no longer needed, he went on to other places. In another way, the wage-worker had his own shop or place of business, where raw material was sent him to be manufactured. In the rural countries of Europe, both methods are still in vogue.

The wage-work system required no capital on the part of the manufacturer, no middleman to handle the business of production or the sale of goods. The producer was the wage-worker, who had no profit on raw material or finished product; he received only wages for his work on raw material furnished him. The supplying of material by the customer was almost universal in mediæval handcraft industry. The first of these methods, the going from house to house by the itinerant workman, was the first to decline. It passed away in proportion to the development of the towns and the home work of the laborer in his own shop. The rise of the gild system in the fourteenth century practically put an end to the itinerant laborer.

28. Handcraft Industry. — The laborer finally became located and carried on industry in his own shop. People brought him the raw material, which he worked into the finished product. Subsequently, custom production appeared in which the master workman furnished the raw material and made the finished product for the consumer.

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But alongside of this system the wage-work method continued for a long time. The handcraftsman differed from the wage worker only in the fact that he possessed the raw material, from which he made the finished product and sold it for a fixed price.

The next stage of industrial evolution was the commission system under which the manager of business employed workmen in their own homes and paid them a commission for the goods produced. It was an organization of wage workers and handcraftsmen under a commercial manager. This was followed by the factory system which developed in the seventeenth and eighteenth centuries, and which will be treated in a future chapter.

29. Industrial Transition. — It is observed that the economic process of production gradually changed with the changing of industrial conditions. For example, the handcraft system brought two lines of economic activity; that of the producer of the raw material on the one hand, and the manufacturers of the finished product on the other. It separated the movable property from the land or real property and brought about other industrial and political relationships. It helped to build towns and eventually to separate rural life from town life.

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CHAPTER IV

LATER MEDIEVAL DEVELOPMENT

30. Transformation of the Household and the Manor. — The house economy of the early Middle Ages was gradually transformed through the rise of manufacturing industry and the concentration of the population in towns. The manorial system was gradually broken down. There were many causes for this. One was the introduction of money payments for use of land and the gradual relinquishment of service on the part of the lords. The manorial courts were gradually merged into the judicial machinery of the crown and into the local courts of the county and the hundred. Villeinage passed out of existence and left a new method of farm labor. The establishment of the rental system and the gradual transformation of the ownership of land in fee simple also hastened the degeneration and decay of the manorial system. After the Black Death, which swept England in 1349, many changes took place, chief among which were the method of leasehold farming and the change from tillage to pasture on account of the scarcity of laborers. Meantime the towns continued to grow into independent existence.

31. The Rise of Towns. — The growth of the towns was gradual. Many of them became fully developed and independent during the manorial period, so that by the middle

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of the thirteenth century there were about two hundred towns, which varied in size from one thousand to twenty-five thousand people. They were different from the rural village in organization and in character of business done. Many of them received their first independence by purchasing it from the lord of the manor. All towns had charters, some from the king, from the nobleman, abbot, or bishop on whose lands they had developed. These charters usually granted the privilege of self-government, and all tolls and general taxes due the government were paid by the town through its officers, and not by the individual through direct taxation. The town became the center of manufactures and trade, just as the manor had been the center of agricultural development. Throughout Germany and France the towns were even more independent than those of England.

32. Independent Town Economy. — At first, towns had but comparatively little trade with each other, for then the town manufactured only the goods to be consumed by the townspeople and the inhabitants of the adjoining rural districts. It was in nature like an expanded house economy, for the town became self-sufficient in manufacturing, trade, and industry. The chief occupations of the town were manufacturing for domestic consumption and trading with neighboring manors, other towns, and to a certain extent, with towns of foreign countries. The markets and fairs continued throughout the mediæval period, but gradually trading became the occupation of members of the town.

33. The Industrial Classes. — The industrial classes were slow in forming. The merchant was frequently a

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manufacturer who employed his journeymen and had his apprentices. The goods were manufactured and placed on sale in the shop, or the work was done under contract. The classes of weavers, spinners, bricklayers, and bakers gradually became separate and distinct. They were frequently employed by a master tradesman, who paid them wages. The old system of pay in kind gradually declined with the rise of the town, and the payment of daily or weekly wages became common. It was a long time, however, before the manufacturer and trader became entirely separate, as the former must find a market for his goods. But the manufacturer finally became a seller of the goods made only in his own shop.

34. **The Gilds.** — The first real organization of the industries of the town was represented by the various gilds that sprang up. These were varied in general character and also changed at different phases of development in the various towns. Foremost among them was what was known as the gild merchant. This was an organization of all the inhabitants of the town who were engaged in the occupation of trading or selling. Its purpose was to protect its members from the encroachments of outside trade, in other words, to develop a town monopoly of trade; and secondly, it had a large social function. The business of the town was manufacturing and trading. Some goods were brought in from other towns to be disposed of, or brought from the rural manors and villages, but the majority were manufactured and sold in the town. All persons who were engaged in selling in any way might as a rule be members of the gild merchant. The membership did not include all the inhabitants of the town

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nor was it always limited by the town walls, for it sometimes happened that people living in the rural districts adjacent to the town were permitted to have membership and to sell goods. As the chief duty of the gild merchant was to control trade and industry and to preserve to its members a monopoly of trade, rules were established for its management. While all buying and selling was not prohibited to persons not members of the gild, yet trade was controlled in such a way that it would not interfere with the members of the gild. Certain privileges were denied those who were not members, and certain tolls or taxes were levied for the privilege of selling, and the time and manner were specified. Indeed, sometimes persons of other towns were prohibited from engaging in trade in towns where the gilds were located.

While the primary purpose of the gild was to monopolize trade, a secondary object was that of fraternal organization and association. It had its own officers, such as president, alderman, steward, deans, chaplain, bailiff, and ushers. It seemed to combine many of the characteristics of the modern fraternal lodge and labor organization. Its members were brethren who were obliged to accord each other equal rights and privileges and to protect one another against any form of oppression. The gild looked after its members who were unfortunate enough to be cast in prison or to be poverty-stricken. These were formally cared for by the gild. They had meetings of a business nature and also meetings of a social nature. Feasts and dinners made up the principal features of the social life. Because the larger portion of the people of the town were members of the gild merchant,

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it often became almost synonymous with the town government. In many instances its growth declined as more formal government arose. In any event it represented the real organized power of the community and must have had great political influence as well as almost absolute industrial control.

35. Craft Gilds. — As industries became more definitely organized and the division of labor became more marked, the various crafts became independent of each other. Just as the gild merchant sought to incorporate a membership of all the trades and to control trade, so the craft gilds sprang up to control the respective industries. The craft gild included in its membership all workers in the craft; namely, master, journeyman, and apprentice. These were associated for the purpose of protecting the industry which they represented. The weavers, dyers, glovers, furriers, skinners, and in fact all the separate trades, became organized into fraternities. These were sometimes called frats, mysteries, or fraternities, or by the name of their occupation; such as skinners, dyers, etc. The organization of these separate fraternities on the basis of industry helped to disintegrate the old gild merchant which flourished in the thirteenth century.

By the middle of the fourteenth century the craft gilds had obtained the mastery of the situation. The monopolistic idea prevailed in the craft gild as in the gild merchant, for the primary object was the protection of its members against undue competition or from any encroachment upon the trade. There were rules established for the government of members, which defined

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the duties and privileges of master, journeyman, and apprentice; and thus the social organization of the craft gild was more compact and fraternal than the old gild merchant. They had common religious observances, paid particular attention to the relationship of members, and developed a distinct social side. It most frequently happened in England that the members of the crafts lived in the same city and street, and even attended the same parish church, so that the duties of the craft gild did not in any way interfere with duties to the church. In addition to this, there were many gilds and fraternities which existed for social, religious, and charitable purposes. Industrial society at this period, then, was very well organized. Through the influence of the church, and of social, fraternal, benevolent, and industrial societies, the mutual sympathy of the laborers and tradesmen must have been thoroughly established and have exerted a wide influence on the industry of the times.

36. Piecework, or the Handcraft System. —The handcraft system involved the piecework or day labor. All payments were at first in kind. A certain proportion of the goods made went to the laborer in cases where there were journeymen employed. Subsequently, after money payments came into vogue, the laborer worked by the piece and received pay according to the amount accomplished. We have a survival of this wherever piecework is carried on in modern times. This gradually changed into the day labor system, under which it was the employer's interest to make the day as long as possible.

37. The Development of Trade. —As already stated, the early method of trade was by fairs or markets held

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periodically. The fairs were generally held annually, to which merchants came from the different towns of England, Italy, France, Germany, and Flanders to sell and buy goods. After the fair was closed, the traders repaired to their own towns to dispose of their purchases to regular customers throughout the year. Markets were held weekly or semiweekly, and were largely for local purposes. Gradually trade relations expanded until the goods of the principal towns of Europe were exchanged. The trading was intermunicipal rather than individual. Laws were established for the control of foreign trade, all trade outside of the town being recognized as foreign.

Trade relations sprang up between all foreign nations. Venice was the center of trade for Italy, the Hanse towns for Germany, and Ghent and Bruges were among the principal trading towns of Flanders. It was through Venice that the trade with the far East became prominent. The products of the looms of the Flemish cities were much sought for among the cities of all countries. In England wool became a staple article, and through the Hanse towns the products of the Baltic countries found their way into all markets. These were chiefly salt, tar, lumber, iron, silver, fish, amber, furs, and coarse manufactured articles. In England, special concessions to towns and individuals to engage in foreign trade were granted by the king. These were granted for the purpose of encouraging foreign trade. Thus, by the close of the mediæval period, the manufactured products of towns and the raw materials of every country became interchangeable throughout Europe. This had much to do

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in changing social conditions and improving the life of the people in general.

REFERENCES.—Select readings from Ashley, Bücher, Cheney, Cunningham, and Gibbins. See References at the close of the last chapter.

CHAPTER V

FROM HANDCRAFT TO POWER MANUFACTURE

38. Self-sufficiency of the Home Declines. — Gradually the handcraft work declined and the manufacturing was done in factories and large shops. The self-sufficiency of the home passed away, and the extensive manufacturing of goods for an enlarged market took its place.¹ Prior to the decline of the handcraft work, a large increase in the number of the master workmen, in proportion to the journeymen and apprentices, had taken place. It showed to what extent the division of industry was established and how, in the general reorganization of society that was to follow, masters, journeymen, and apprentices must all be brought into larger units of social order. There were many causes for the decline of handcraft and the development of large factories.

39. The Decline of Handcraft through Increased Demand for Goods. — Even before the development of power manufacture, caused by the inventions of the latter part of the eighteenth century, there were forces being developed which would eventually cause the slow decline of handcraft. A general increase of population throughout the various nations, the concentration of the population in cities, the development of trade and commerce, which brought large demands upon the manufactured goods, were in themselves sufficient to force the concen-

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tration of manufacturing industries. The master with one or two journeymen could not fill a large order for goods which was demanded by the exigencies of trade. Some one must undertake the responsibility of supplying these large demands for trade. In the self-sufficient family or town, goods that were needed could be manufactured to order, and the consumer could wait until they were finished; but the increased consumption of goods in foreign markets demanded a large amount of goods at once, and only those who were able to place large orders could compete in the market. So that, instead of inventions being the sole cause of the industrial revolution that followed, there was an earlier cause for the decline of handcraft; in fact, necessity, here as elsewhere, was the mother of invention, and the demand for rapid manufacture forced the intellect of man to devise ways and means of manufacturing goods through improved machinery and rapid processes of manufacture.

Nearly all the large trade fell into the form of commission business. The small handcraft enterprises were consolidated into larger manufacturing plants as the process of centralization continued. In other instances the larger centralized manufacturing establishments took over a large part of the preparatory industries and left only the finishing of the article to the hand industries. Thus the large number of masters who had a small and sometimes meager income were reduced to the level of the wage-earner and sometimes nearly to starvation as their business became absorbed in larger enterprises. As a result, the masters and workmen were obliged to seek employment from the large enterprises.

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40. **Hand Work supplanted by Machinery.** — It was in this manner that the hand work was gradually supplanted by power manufacture and the handcraft gradually declined because goods could not be manufactured by hand in competition with machine-made goods. Everywhere the demand of a larger market and the increase in the number of new industries made it impossible for the handcraft system to supply the needs of the times. Goods must be manufactured on a large scale, and only combined industry and power manufacture could satisfy the demand.

41. **Influence of Mechanical Inventions.** — During the latter part of the eighteenth century great mechanical inventions changed the entire method of industrial enterprises. These inventions came through necessity. The pressure was large on the spinners who could not supply the demand of weavers. One weaver could use the product of a number of spinners, hence it was difficult to find a sufficient number of the latter to keep the looms in operation. The invention of Kay's drop box and flying shuttle, in 1738, increased the difficulty, as by it one weaver could do as many yards as two could do without it. The trouble was so great that the Royal Society offered a prize to the person who would invent a machine that would spin several threads at the same time.

The first invention to satisfy this demand was the spinning jenny of James Hargreaves in 1764. This was followed by Arkwright's method of spinning by rollers, which was first patented in 1769. Crompton's "mule," which combined the inventions of Arkwright and Hargreaves, was invented in 1779. By these inventions the methods of spinning far exceeded the slower processes

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of weaving. Cartwright's power loom supplied the deficiency. This was introduced in 1784, and after years of development came into general use by the beginning of the nineteenth century.

While these great changes were going on in England, the American cotton gin was being perfected by Eli Whitney whose great invention dates from 1792. By separating the cotton seeds from the boll, the production of cotton was greatly stimulated in the United States, which caused a great demand for slave labor.

The perfection of the steam engine in 1769 and its application to power manufacture in 1785, by James Watt, completed the methods of rapid production in the textile fabrics.

Roebuck's invention of a new process of smelting ores by means of coal supplied a great want as the forests were being depleted in making charcoal. His blast furnace was invented in 1760, but its full importance was not realized until 1790 when the steam engine was used to make the blast. This invention stimulated the production of coal, causing the great collieries of England to teem with life. The dangers of the coal mines from explosions of gas caused the invention of Sir Humphry Davy's safety lamp. Thus, within a period of a little over forty years, a transformation of industry occurred, greater than ever known before or since, excepting possibly the recent effect of electric appliances.

The great improvement of industry caused by the rapid increase in production had its influence on transportation. The building of canals from towns to tidewater for the purpose of cheap transportation followed. The first of

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these was built in 1761 from Manchester to Worsley. Telford and macadam roads were built over England during the last part of the eighteenth century. These were of immense benefit as the modern railway had not yet come into use. In the United States the building of roads and canals received a good start in the nineteenth century until checked by railroad building. It may be well to remark incidentally that no more lasting service was ever done for England than the building of good macadam roads throughout the realm. The recent return to road building in the United States is an acknowledgment that it was a great mistake to delay for nearly a century such a great and needed improvement.

42. Agricultural Changes. — The old methods of agriculture passed away along with the old methods of production. The lands were mostly held in small strips widely scattered. By what is known as the process of "inclosures" these small strips were united into one large tract and each owner given his share in a contiguous piece of land, greatly facilitating the work of the farmer. Improved methods of tilling the soil were introduced, and the productivity of the soil was greatly improved. Methods of drainage of wet lands and the use of fertilizers with rotation of years wrought the great change. The breeding of higher grades of sheep and cattle was made important. Large amounts of capital were invested in agriculture which greatly increased the importance of farming. Finally, in 1793, a government Board of Agriculture was created to advance scientific farming.

REFERENCES. — See Chapter III.

CHAPTER VI

INDUSTRIAL REVOLUTION

43. The Effects of Power Manufacture. — At first the spinning jenny could be used in cottages, but as the power loom became perfected it was necessary to have a special building for its work. The improvement in machinery, the increase in the size of machines, led to the construction of large buildings for the purpose of manufacturing. The carding, spinning, and weaving were all done under one roof. The effect of power manufacture was not only to change the entire method of production, but also to change the whole fabric of industrial society. This was done so completely and so rapidly, almost in a quarter of a century, that it has become known as the industrial revolution. It affected all kinds of industry and every part of industrial society.

44. The Factory System. — It was at this period that the well-known factory system was evolved. The domestic and gild systems were inadequate to the demands of power manufacturing. The method required larger buildings or factories, the accumulation of capital, and the aggregation of large bodies of laborers. First of all the woolen mills were built, and these were followed by cotton mills; then in rapid succession came factories for working metals, wooden wares, leather goods, and other forms of production. These new methods of production revolutionized industrial society.

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Prior to this goods were usually manufactured in the home or small shops adjacent thereto. All of the processes of manufacturing an article from raw material to the finished product were carried on under one roof. The goods were sold as made or placed in the shop to await customers. Frequently the apprentices and laborers lived with the master and received remuneration in goods or money in proportion to the amount of work done.

Under the new method the laborers received a daily wage and dwelt apart from the manufacturers and capitalists. Indeed many of the small masters, owing to the concentration of industry, became laborers or foremen in the factories. Three distinct industrial factors appeared; namely, capitalists, manufacturers, and laborers. The use of machinery brought about the division of labor, and instead of a laborer completing an article, it took a large number of workmen to make the finished product, each doing a small part.

The organization of industry left the laborer not only to compete with his fellows for position and wages, but to combat single-handed the combination of capital and managing ability. This he could not do successfully. Therefore, to save themselves from industrial slavery, the laborers began to organize. This was the foundation of trade unionism. The object of the organization was chiefly to shorten the hours of labor, insure a living wage, and to correct factory abuses. Soon two great industrial forces, organized capital and organized labor, each essential to the other in production, became suddenly antagonistic on account of discrepancies in distribution.

45. The Effects of Factory Life. — During the last three

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decades of the eighteenth century the productive industries of England were well established under the factory system. Under it England grew rapidly in wealth and power. Trade improved, industries developed, commerce expanded, and the population increased. But with all of these signs of prosperity, untold misery came to large classes of the laboring population. The industrial revolution brought great prosperity to the world, but caused multitudes of laborers to suffer. In all rapid industrial progress attendant upon discovery, invention, or new industrial methods, the world at large progresses, while many individuals suffer on account of changes in conditions to which it takes time for the population to adjust itself.

Hand work continued to survive a miserable existence in garrets and cottages in England, unable to compete with power manufacture. In Germany and elsewhere on the continent, hand work and independent production were more persistent than in England. Before the passing of the first half of the nineteenth century, the factory system had obtained complete mastery of England. Many laborers who were not able to adjust themselves to the new conditions became paupers and vagabonds. For those who labored, wages were higher though less certain, and the cost of living was increased. The mills were unsanitary and uncomfortable; the days of labor were long, being twelve to thirteen and sometimes fourteen hours. A large number of women and children worked in factories and mines. The wage system applied to farm labor entailed a hopeless and restless existence. The factories always absorbed the young life, and without restriction became

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heartless destroyers of women and children. England was growing rich, but human happiness was not increasing.

46. Theory of Non-interference with Economic Production. — A well-developed policy of leaving economic production to free competition and to the control of the law of supply and demand prevailed in the industrial world. Government restrictions were removed, liberty of individual choice was extended, and the philosophy of making a nation rich, regardless of social conditions, prevailed. The philosophers taught political rights and civil liberty, and the government hastened to protect the individual in this liberty and these rights. But economic production and distribution must be left entirely to itself to work out its own problems. The nations were seeking the best methods of growing wealthy and neglecting the more important question of social well-being and human happiness.

47. The Development of Political Economy. — Adam Smith has been called the “Father of Political Economy.” His “Wealth of Nations” was the first monumental work of the science. He advanced the theory of the entire removal of artificial interference with economic production and trade. His work was devoted largely to production and failed to give adequate attention to distribution. He showed how a nation could grow rich, but did not show how it could grow rich and just at the same time. Malthus, Ricardo, McCullough, Mill, and Cairnes followed in the line of succession and continued to develop the economic theories of Smith. The laissez-faire or non-interference policy became thoroughly established. Enlightened economic discussion aided greatly industrial development, but fell short of satisfying many of the needs of the times.

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As a science in its narrow sense, political economy had nothing to do with ethics and the adjustment of the finer social relations.

For centuries preceding the advent of the doctrine of Smith and his followers the government had considered it its duty to interfere with trade, labor, wages, and in fact all economic conditions. The growth of the sentiment of liberty influenced by political revolutions, particularly in France and America, was applied to the industrial world. If men were allowed to be free in economic choice, if all industry was left to the control of natural economic law, the industrial system would conform to theories of justice.

Gradually all government control of labor declined. English laws regulating apprentices were modified in 1803, 1809, 1813, and were finally abolished in 1844. The Navigation Acts began to decline in 1796, and by 1849 were entirely repealed. The removal of export and import duties was finally accomplished in 1849 after a long agitation. Free trade became the adopted policy. The influence of the policy of non-interference was felt in every economic enterprise. Many of the acts were wise measures, for the mediæval restrictions were in reality a detriment to economic progress; but a total abandonment of government control could lead only to injustice, for it was based on the principle of the survival of the fittest. It was a return to natural justice in the economic world in which might made right.

48. Reaction from the Non-interference Policy. — Meanwhile the nation gradually awakened to the abuses that had crept in with too much freedom. A great political reform movement swept over England about 1830, which

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changed the political complexion of parliament and made it more truly representative of the popular will. From a complete aristocracy, the nation made seven strides toward a true democracy. With the vitalizing of political government, the needs of the people became prominent again. The first important reform was attended with factory legislation. The labor of children of seven years of age and upward had become a national shame. The long hours, the hot, uncomfortable factories, and the harsh treatment of masters finally aroused the nation. The agitation began in 1796 and continued during the whole of the nineteenth century. Shorter hours of labor, sanitary conditions, employer's liability to the laborer for injuries, prevention of young children and women from labor in mines and factories were finally established. It took nearly a half century of agitation before adequate legislation was brought about. Indeed it was not until the close of the nineteenth century that it could be said that the English factories were well regulated. With the same vigor the regulation of agricultural affairs was carried on. Nor did the government stop with government regulation of industries, but became an active agent in carrying on industries. The telegraph, the telephone, the postal savings bank, and the parcels post are owned and operated by the government of England. If not a reversal of the doctrine of non-interference in industry, it is a demonstration that the doctrine is entirely insufficient to satisfy modern demands, and that government regulation to a limited extent at least is necessary to secure industrial rights of the people.

49. Labor Organization. — While the government increased its control of industry, voluntary association for

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business or protection developed rapidly. Labor organizations, which at first were declared unlawful, have become permanent and essential institutions. Before the middle of the nineteenth century, trade unions existed in England in nearly all lines of industry. They experienced a rapid growth in 1830 and 1834. After the law of 1871, which accorded them legal right to exist, another period of growth appeared in 1873 and 1874. The last period of growth began in 1889. During this period England became completely unionized and the unions are federated, but they are well regulated by wholesome laws.

50. **Conditions in the United States.** — The early economic conditions of the United States varied from those of England on account of the undeveloped state of industries in the former country. In the main, however, the United States is traveling over the same course as England took; only, on account of immature conditions of industry, the principal movements have been about twenty-five years behind England. The non-interference doctrine prevailed in everything except the tariff which became a government policy about the time England was agitating free trade. But in the regulation of labor and industry, in the control of corporations, in factory legislation, and, indeed, in everything pertaining to the regulation of industry, the government has evinced a wholesome fear of interfering with trade and industry. More recently the United States has awakened to the fact that regulation and control, in a measure, is necessary for the perpetuation of civil liberty and the establishment of industrial liberty and justice. One of the great difficulties of government regulation of industry and commerce is the Federal system of govern-

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ment. A single state attempts to regulate a railway, insurance company, or industrial corporation which does an interstate business, or a state may attempt a reform in taxation which is not consistent with laws and practices of surrounding states. Its success is not assured until Federal coöperation or control is invoked. The limitations of constitutional rights frequently prevent a proper adjustment. While the wants of the people are easily made known in the government of the United States, the satisfaction of the demands of substantial reform is difficult to attain.

REFERENCES.—Bücher, "Industrial Evolution"; Ashley, "Economic History"; Cunningham, "Growth of English Industry and Commerce"; Cheney, "Industrial and Social History of England"; Ely, "Evolution of Industrial Society." See Chapter III.

CHAPTER VII

COMMERCIAL DEVELOPMENT

51. Trade among Primitive Peoples.—Commerce in

- its formal meaning could not be said to have existed among the natural races, nor, indeed, among those of barbarous character. Among these people each tribe was self-sufficient; it produced what it consumed. Many of the tribes engaged in barter of certain articles and in war plundered the goods of one another, but it was not until the division of labor and the development of systematic manufacturing that anything worthy the name of commerce existed. At first this trade of primitive peoples was merely incidental to their meeting, but subsequently traders sprang up who went from tribe to tribe carrying various wares. Intertribal trade was, at first, a rude species of barter, in which the value of the article had but little weight. It was a method of "swapping" to promote good will or to please the fancy. Subsequently it became a method of satisfying the needs of the tribes, which could not be done with home production. Among the primitive tribes of America, Indian traders existed who carried trinkets and ornaments from tribe to tribe. In India, where all ancient customs seem to have crystallized, the single trader continued down to recent times. Among Asiatic peoples, trade was carried on overland with great caravans.

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52. Commerce of Ancient Nations. — After national life had been well begun, a system of commerce between ancient nations sprang up, and the earliest records of China, India, Russia, Assyria, Ethiopia, and Phœnicia are of wealthy nations engaged in extensive commerce. This brought into existence a distinct class of merchants, or traders. The methods of transportation of ancient nations varied according to their geographical conditions and the degree of their economic development. First, there were the great caravans of the desert, in which the carrying power was the camel or, as in India, the elephant. In western Asia the caravans which traveled overland between the great cities of Egypt, Assyria, Persia, and Palestine, were chiefly conducted by Arab traders. Subsequently river traffic developed, but it was national rather than international commerce. The Ganges and the Indus, the Tigris and the Euphrates, the Nile, and in modern times the Danube, the Elbe, and the Po were means of traffic between different cities and countries. Later, as boatmen became more venturesome, the inland seas became highways of commerce, and early traders ventured on the Persian Gulf, the Black, Mediterranean, Caspian, and Ægean seas.

53. The Phœnicians were Masters of Commerce. — The only people of antiquity that could aspire to claims of commercial greatness were the Phœnicians, who were the first to become really masters of traffic on inland seas. The great and wealthy cities of Tyre and Sidon, situated on the east shore of the Mediterranean Sea, became the centers of an extensive commerce. From these points the Phœnicians trafficked with Egypt, Assyria, India, and

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subsequently with Greece, Rome, Spain, and Britain, and became familiar with all the coasts and ports of the Mediterranean. Abandoning the prevalent system of obtaining wealth by conquest and plunder, these people gained their wealth and independence through industry and commerce. The secret of their power seems to have been an inordinate desire for gain, skill in shipbuilding, the manufacture of certain articles not found in other nations, and the adventurous disposition of their seamen. The advantage of having the carrying trade for the world was a source of enormous wealth, and the cities became rich and populous. For the five or six hundred years that the Phoenicians ruled the seas, they planted colonies in Greece, Italy, northern Africa, Spain, and Asia Minor. The most important of these colonies was that of Carthage, built and planned after the city of Tyre. The Carthaginians continued to develop wealth by trade in the same manner as the parent colony. They developed sufficient strength to cope again and again with the Roman nation, but were finally overthrown. During the period of Phœnician supremacy, Greece developed a limited commerce, although her states, cities, and colonies were largely self-sufficient. Rome was not a commercial nation, for primarily her wealth came from agriculture, and when she became strong enough to gain her wealth by trade, she obtained it by conquest and plunder instead. Yet many ships laden with foreign goods came up the Po and the Tiber and visited the seaport towns.

54. Mediæval Commerce. — The great commercial period which lies between the fall of the Roman Empire, 476 A.D., and the discovery of America by Columbus is marked by three important developments; namely, Byzan-

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tine commerce, the rise of the Italian cities, and the organization of the Hanseatic League. After Constantine established the seat of the empire at Byzantium, this city gradually grew into a center of Oriental trade. For a thousand years the strait of Bosphorus was the gateway of trade between the East and the West; for a thousand years the trade of the Mediterranean Sea and the caravan routes was focused at Byzantium or Constantinople. During the Dark Ages the city of Constantinople fostered what little commerce existed in the East, while in the west of Europe the monasteries and princes encouraged and controlled trade.

It was an age of national distrust and national hostilities, but a passive trade was carried on between various nations, generally conducted by foreign traders. Charlemagne, by extending the boundaries of his territory, made it possible to encourage traffic in foreign goods. The Arab Moors at first greatly opposed traffic with the Orient, but subsequently encouraged it, but it remained for the Crusades to acquaint the East with the West and open once more the trade of nations.

The commerce of the Middle Ages reached its highest development through the Italian cities. The cities of Amalfi, Genoa, Pisa, Venice, and Florence, in southern Europe, were ready to take advantage of trade relations that sprang up between the East and the West; indeed, they began their great career by assisting in transporting the troops and goods of the Crusaders to Palestine. From this time on, the cities grew in wealth, Venice being the leader of all in trade. The Venetians had been natural sailors for five hundred years prior to the Crusades, hence

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they were more ready than any other national group to take advantage of maritime trade. It is estimated that in the fourteenth century Venice had three thousand merchant ships, manned by twenty-five thousand seamen. The Venetians began their commercial career by supplying fish and salt to the world, in exchange for which they obtained food, clothing, and timber for their galleys; but their chief wealth arose from trade with the Orient. They brought the rich silks and manufactured articles of the Orient and exchanged them for products of western and northern Europe. The merchants of Venice thus had the advantage of an immense traffic, as the Venetians were their own carriers as well as the commercial carriers of other nations. As a consequence, wealth increased rapidly. Indeed, the history of the world shows that the nation which becomes preëminent in commerce usually develops its carrying trade along with it, and that the nation that obtains the supremacy of the carrying trade is very apt to obtain the commercial supremacy of the world.

In conjunction with the trade of the Italian cities we have the organization of the Hanseatic League in the north of Europe. Independent cities entered into a league to protect their trade from pirates and to facilitate the exchange of goods. The number of these cities finally reached eighty-five, of which Hamburg, Lübeck, Bremen, and Cologne were among the important ones. These cities were connected by inland trade with Italian cities, and while the cities of the League grew rapidly in wealth, their prosperity only added to the increase of wealth of the Italian cities, which were gateways to the Oriental trade.

The Hanseatic League established rules for the regulation

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of trade and developed commerce to a great extent. Primarily established to prevent piracy, to prevent the extortion of lords, and to stimulate production and trade, the League laid the foundation of mercantile law and began the policy of reciprocity and freedom. For four hundred years it was prominent in the control of commerce, and during this time practically monopolized the commerce of northern Europe. It maintained armies and navies and carried on war against kings. But its arbitrary power finally became intolerable and its existence a menace to trade. It began to decline in the latter part of the fourteenth century, and by the end of the fifteenth century it had lost its power. The decline of feudalism and the rise of national life, coupled with the determination of each nation to control its own commerce, and the competition aroused by a developing trade, swept away all concessions and left the League helpless.

55. Nature of Mediæval Commerce. — The traders of the Middle Ages to a great extent disposed of their goods through markets and fairs which were established on certain days of the week. These originated from the fact that it would be advertised that a certain caravan or ship laden with goods would appear at a certain time, and in order to obtain the goods the people came from all parts of the country. As the cities developed, these became regular markets. Finally the traders who attended to the sale of these goods established regular shops to take care of the surplus goods. As trade became more extended and regular, these shops became continuous and the transporters delivered their goods to the shops. Gradually the shopkeepers became regular importers of goods.

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From that time on, the lines were gradually drawn between the wholesale merchant, importer, or jobber, and the retail merchants. The competition in trade led to various restrictions among the cities and towns engaged in trading, and had a tendency to create certain privileges and monopolies. There was much jealousy among the towns, especially among the Italian towns, and much rivalry, which caused bitter feeling. Their salvation, however, lay in the fact that they developed manufactures very rapidly. While the nations or countries that have the carrying trade of commerce have tremendous advantages, no nation has ever built up an extended commerce without having a large amount of raw materials or manufactured products to export to other nations. The gild merchant was one of the mediæval institutions for the control of trade. It was a protective association which included all those who were engaged in buying and selling goods within a given town. Only those who were members of the gild had the privilege of trade. In this way local merchants protected themselves against traders of other towns and foreign traders as well. Following this protective idea, there came in vogue a body of laws and regulations of trade known as the "law merchant." Merchants made their own rules controlling trade, to suit their own needs. The "law merchant" was represented in several types. Besides the gild type, the law of the municipality, the central national law, and the law of voluntary, arbitrary bodies included the chief sources of the law merchant. It laid the foundation of mercantile law.

In England the local gild merchant became prominent at an early period, but subsequently the foreign trade of

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England fell into the hands of foreigners. Real English commerce began at the appearance of the English traders, or "merchants adventurers," as they were called, who began to compete for the carrying trade. Originally the term was applied to merchants who undertook to export goods to new or unrecognized markets, or to merchants of various towns who were organized for their own protection. Finally the company of "Merchants Adventurers" was incorporated, which became a powerful and wealthy association. In 1564 they received a royal charter from Henry VII., under the title of "The Merchants Adventurers of England." This gave a great impetus to an independent national commerce.

56. **Modern Commerce.**—Mediæval commerce resembled the ancient commerce in the concentration of trade in towns and cities. The chief difference existed in the more widely extended area over which it operated, having longer routes of travel and a larger number of stations. It also differed in the larger number of articles for exchange, arising chiefly on account of the development of manufactures and the increased interchange of goods. Modern commerce, which may be said to date from 1492, is marked by oceanic transportation. It was the era of discovery and colonization. First, the invention of the mariner's compass gave an impetus to sea travel. The use of gunpowder brought new means of defense to commerce. The discovery of America opened up new inducements to oceanic travel, and the discovery of a route around the southern part of Africa to the East Indies, and another route around the southern part of South America to the Philippine Islands, opened up great ocean highways of

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travel. This occurred at the period of the rise of modern nations. Portugal, Spain, The Netherlands, England, and France began to compete for the commerce of the world.

57. The Mercantile System.—During the period of the rise of national commerce there came into existence a system of trade so important as to mark an epoch of history. It has been known as the Mercantile System, and represents a doctrine of trade which has its advocates in modern times. Mercantilism was a distinct step in the evolution of commerce just as monarchy was in the evolution of government. In the fifteenth century there was great confusion of trade, caused by the local jealousies and rivalries among the local and foreign merchants, the Merchants Adventurers and the Hanse Merchants. A movement was started which had a double purpose, to bring about unity in domestic affairs and to develop national defense in trade. It was the monarchical principle applied to commercial affairs. It was a process of "state making and national economy making at the same time."¹ Mercantilism represents the transformation and reorganization of industrial society as well as the rise of national commerce. It not only transformed and united the municipal, industrial, and commercial interests, but set up barriers of trade against the encroachments of other nations. To subject local interests to national interests, and to advance the latter beyond the interests of other nations, were the prime motives of the mercantilist doctrine. In the subsequent development of mercantilism it stood for government restrictions on commerce and trade.

¹ Schmöller, "The Mercantile System."

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Restrictions on imports or exports, limitation of the carrying trade to national ships, the tariff on exports and imports, and the attempt to make a favorable balance of trade so as to leave gold and silver in a given country, were some of the cardinal points in its later history. While defective in many of its general tenets, mercantilism was serviceable in building national life and national supremacy. It affected all nations, even The Netherlands, and later, Italy and Germany. In the nineteenth century there was a great reaction from the policy, especially in England; but in more recent times it has revived, so that each nation seeks to protect its foreign commerce either by tariff, subsidy, or reciprocity treaty.

58. National Competition. — Portugal at first became prominent and obtained a monopoly of the East India trade, especially in the trade in spices, but war with Spain furnished an opportunity for the Dutch, which they readily seized. The early maritime enterprise of Portugal, stimulated by the genius and daring of Prince Henry the Navigator, led to discoveries and an extended commerce. The result was the commercial supremacy of Portugal in India and China and the competition with the Dutch trade. At the opening of the modern period (1495-1521) Lisbon was the chief emporium for the distribution of Oriental goods, and Portugal reached her zenith of commercial power. The decline of her prestige in the East was followed by her forced union with Spain. After her freedom was obtained (1640), war with The Netherlands further weakened her power; but a commercial treaty with England resulted in the transference of her trade from the Dutch to the English and strengthened the already powerful

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nation. Spain had a tremendous trade in the Western hemisphere on account of her colonization and production of the precious metals. This gave her great prestige in the commercial world, but her policy eventually caused her ruin. She failed to develop home manufactures, and the silver obtained from America passed out of Spain into France and the Netherlands to pay for the manufactured articles used by Spain in home consumption and foreign trade.

The rise of the Dutch, whose central cities were Antwerp and Amsterdam, shifted the monopoly of trade to the Netherlands. They soon secured the monopoly of the East India trade from Portugal. The Dutch were thrifty people who understood the art of commerce. At home they not only developed manufactures, but established a system of banking and finance which was of great service on their own account and also on account of the commerce of the world. The Dutch had a strong mercantile policy which established great fleets for carrying on commerce, and they made commerce an end in itself; but their commercial development had extended beyond their national and political life, and therefore they were not able to hold their own in the competition of nations for trade. Subsequently they lost this trade in the development of the English East and West India Companies, which came into competition with them and obtained a monopoly of the trade.

59. The French and the English. — Down to the time of Henry VIII. the Lombard, Dutch, and Hanse merchants monopolized the most profitable branches of trade. In England, shipping was almost wholly in foreign hands,

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but the Tudor kings had a special object in exalting wealth and the maritime power of England. A feeling of resentment continued to grow toward foreign merchants until it was expressed against the Hanseatic League, whose factory at the "Steel Yard" operated independent of the laws and social order of England. It was in the reign of Edward VI., in 1552, that the shackles of British trade were broken by placing the Hanse factory on the same basis as other merchants so far as commerce duties were concerned. Subsequently, in the time of Elizabeth, the Steel Yard factory was closed. From this time on, British trade was promoted by every effort of government. The explorations and discoveries by the English during the sixteenth century widely extended commerce. Companies were formed for trade, including the East India companies and the Company of Merchants Adventurers. They controlled a large portion of the export trade, but the whole development of manufactures and trade was under a system of monopolies. These monopolies eventually became oppressive.

But Cromwell, by the celebrated Navigation Acts of 1651, later suppressed private monopoly and made a gigantic monopoly of the British government. The law forbade the carrying of goods to or from England or her colonies in any except British vessels. As a result, ship-building sprang up, and subsequently a tremendous trade was developed; but more than all, the great work of English development during the Tudor period was made secure by these acts. In France the same system of restriction was instituted under Colbert, for mercantilism had culminated in France more than in any other country. The

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idea prevailed that a country grew rich only through its trade balance, and every effort was made to secure the favorable balance of trade through the restriction of exports and imports. But England had become mistress of the seas because of her immense carrying trade and the consequent development of her manufactures and agricultural products.¹

60. **Recent Commerce.**—The main courses of English trade continued to enlarge down to the end of the Napoleonic wars in 1815, but a new era of commercial development seemed to date from this event. The industrial revolution, brought about by the introduction of power manufacture, changed the course of commerce by the introduction of machinery in the making of cotton and woolen goods; the building of ship canals, the division of labor, the development of the factory system, the use of steam and water power, and the quickening of manufactures and of domestic commerce gave a great impetus to foreign trade in England and her commerce continued to extend. The introduction of the *laissez-faire* doctrine through the teachings of the early economists advocated the removal of restrictions on trade. The Physiocratic doctrine in France had a similar influence in that country. But nations that had gained such prestige under restrictive measures were able to advance without government aid. The commercial supremacy of England continued on account of her large manufacturing interests and her immense carrying trade on the ocean. This was aided by the repeal of the Corn Laws and the development of free trade. By these measures England had cheaper food

¹ See *supra*.

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with which to feed her army of workers. Having built up her commerce, having become mistress of the seas, having developed a foundation for manufactures, England entered upon free trade at the opportune moment. Her commerce and trade went forward with a bound.

61. American Carrying Trade. — In the nineteenth century America became England's great competitor in the carrying trade. Down to 1857 the carrying trade of the United States increased rapidly; since that time it has relatively declined. This can be attributed to several causes: first, the Civil War, which absorbed all the energies of the United States for several years, had a tendency to destroy merchant marine rather than develop it. England also has had an advantage in the construction of steel vessels since 1860. The tariff has prevented a development of American shipping, and the immense internal improvement of the United States has absorbed capital that otherwise might have gone into the international commerce. Yet, during this period, the United States has become the greatest export nation in the world. Her enormous supply of raw material, agricultural products, and the recent development of manufactures under the administration of a protective tariff have advanced her foreign trade.

62. Development of American Commerce. — Having recovered from the Civil War, the internal commerce of the United States began to expand and subsequently her international trade. Since 1885 she has become a formidable competitor of France, England, and Germany in the world's markets. She has become the greatest manufacturing nation in the world, as well as the greatest

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export nation. In 1905 the value of her manufactures was about fifteen thousand millions, or greater than the estimated manufactures of the United Kingdom, Germany, and France. The total value of manufactures entering the world's market is estimated at four thousand millions; of this the United States supplies but five hundred millions, or $12\frac{1}{2}$ per cent. It indicates that there is a vast opportunity for the United States to develop the exportation of manufactured goods. But the discrepancy between the amount of the product and the international trade is not necessarily indicative of an impoverished condition of the United States; indeed, it represents just the opposite. The rapid development of the United States has enabled her to absorb over twelve thousand five hundred millions of her own manufactures and to export less than five hundred millions. This is evidence of great wealth and prosperity; also, it is evidence of the principle that domestic commerce is of far greater importance to the nation than foreign commerce, and that periods of prosperity of the nation cannot be estimated by the amount of its foreign trade. Nevertheless, America is to-day in sharp competition with England, France, and Germany for the markets of the Old World, and for the newer markets of Africa, South America, and the Orient.

63. Causes of Commercial Success.—The commercial success of a nation depends primarily upon the amount of raw materials and manufactured articles that it has to export after the home consumption has been abundantly supplied; upon transportation by land and water from the interior to the seaboard; a cheap and bountiful food

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supply for a thrifty and vigorous labor population; the development of the merchant marine, and the successful choice of trade routes whereby vessels may be laden with marketable goods for the return voyage. Moreover, it is necessary in modern times that merchants promote and advertise their interests in the countries in which they are seeking a market. The question, too, of the good will of nations is very important, and commercial treaties which promote favorable terms of trade are exceedingly valuable. The tariff may be a detriment to foreign trade, but it may also be used at times, like other restrictive measures, to temporarily promote the welfare of a nation. However, to the nation that has large resources of raw material and abundant food supply, first-class labor power, abundant opportunities for steam, water, and electric power, free international trade would be a great advantage in the long run. Some nations have advanced their carrying trade by giving subsidies to the ship companies. This may develop for a time the number of the ships owned by the exporting nation giving the subsidy, but in the long run it is detrimental to national welfare and development.

64. Principles of International Trade. — Commerce is an instrument by which commodities are placed in the hands of consumers, and that system of commerce which will do this the most effectually and at the least cost is of greatest benefit to the consumer. In the thrifty nation, domestic commerce is of far greater importance than international. In modern times, through universality of invention, through steam and electricity applied to machinery, each nation becomes more and more self-sufficient

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and independent in the supply of manufactured goods. The agricultural product is limited by the soil and climate, and a nation must import what it cannot raise. The exportation of the surplus goods of a nation has a great influence on its prosperity, but the power to consume all of its raw materials and manufactured products may be an evidence of greater financial prosperity, for it is only a small number of workers of any nation who are putting the labor power into products for international trade. It is estimated that between one fifth and one sixth of the wage earners of Great Britain are putting labor power into goods for exportation to foreign markets. Sooner or later, as all foreign trade must balance, the imports and exports of all the nations combined must be the same. There is a theory that the wealth of a nation is made by its trade balance and that the extent to which exports exceed imports is an evidence of national prosperity and power. But this is a false assumption, for if a nation imports goods, it is an evidence that it has means to pay for them and also assumes that there is some advantage to be gained in the importation of these goods. In other words, the nation that purchases abroad has added to its own stock of wealth; on the other hand, it may be selling goods that might be consumed at home but are put upon the market to satisfy some more urgent demand of indebtedness. Yet, in the long run, a nation could not continue to import goods without loss unless it should have intervals of favorable export trade. However, the international trade may benefit all nations engaged in it, just as domestic trade may benefit all individuals engaged in it. The gains, however, in inter-

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national trade, are of the same nature as the gains in domestic trade; that is, they are merely relative.

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CHAPTER VIII

MODERN INDUSTRIAL LIFE

65. The Competitive Life. — Modern industrial life is founded on the competitive system. Each individual is devoting his energies to the occupation that he deems will yield the largest possible returns for his effort. He enters the industrial life with the trading power of capacity, energy, skill, and, if he have it, capital. Primarily he does not consider the welfare of those of his class with whom he competes. Indeed his aim is to distance his competitors in the struggle for existence or for wealth and power. Several laborers may be seeking the same place; one is chosen and the others must find labor elsewhere. The merchant competes with fellow-merchant in buying and selling; the banker competes with other bankers for the business of exchange; the manufacturer endeavors to undersell others by making a more attractive article at a less price than others can make and sell it, and the great industrial and transportation companies compete with other similar companies or, indeed, attempt to monopolize industry and shut out competition. In general, all individuals who make up modern industrial society are in a general competition regardless of classes.

Above this general competition is a special competition of groups of individuals. The family group, the

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primary unit of society, as a center of industrial activity competes for power and position with other groups. Business firms in a given occupation compete with one another; great corporations of organized capital and labor are competing with others of their kind. The railway and steamship companies compete with one another for traffic, and finally the great trusts, corporations of corporations, are in open competition.

While all wage earners are competing with one another for position, the competition becomes intense when narrowed to a single industry, and it reaches its maximum when several are competing for the same occupation in a given factory. Thus, take a laborer at a puddling furnace in an iron foundry; he is in open competition with others of his trade in the same factory. If he is thrown out of employment on account of the excess of laborers, he seeks the same employment in similar industrial establishments. If there is no room for him, he must wait until an opportunity to labor occurs, or else he must seek employment in other occupations in which he is less skilled and failing in this, he must join the army of unskilled laborers to work at any occupation that offers. Whenever occupations are interchangeable, competition occurs. Thus there is a general competition between the laborers of similar occupations in woolen mills and cotton factories, but the competition within the cotton or the woolen factories becomes specific and if a large number of laborers are seeking the same place, it becomes intense. The general effect of the division of labor is to render it immobile. Each laborer learning one trade is unfitted for others. But as the division and subdivi-

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sion of labor increases a laborer performs such a small part in any manufacturing or trading process that it takes him but a little time to learn his duty. Thus extreme division of labor has a tendency to break down the barriers of the groups and to allow a laborer to pass more readily from one industry to another. Therefore, while the introduction of machinery and the organization of industry has a tendency to discourage competitive groups, because of the minuteness of the division, it makes it possible for the laborer to prepare himself in a short time for the occupation and to change more readily from one industry to another.

66. The Coöperative Life. — While competition is the basis of industrial life, the coöperation of individuals is a necessary condition of stable society. This coöperation may proceed unconsciously by the individuals in competition. Thus the farmer works for the banker, the merchant, the commercial agent, the laborer, and all of the professional classes. His purpose, after supplying himself, is to furnish food for the laboring millions. But he could not do this if the laboring millions did not in turn furnish him with clothing, machinery, utensils, houses, and furniture. Likewise the manufacturer of boots and shoes receives in return for his services, food, clothing, and other necessities and comforts. The common laborer receives his food from the farm, his clothing from the factory, his fruit from the orchard, his fuel from the mine or forest, and his salt, sugar, pepper, from other sources. Counting all of the different groups of producing, transporting, and exchanging industries involved, thousands are daily waiting upon him; for this service

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he gives his daily labor, or its equivalent in money. Thus all the members of a well-organized industrial society are waiting upon each other, are coöperating in transforming nature's resources into articles of use.

In addition to this unconscious coöperation is a conscious coöperation of groups. Thus when men contribute capital and labor to obtain a given result which each share in proportion to service or money contributed, it is conscious coöperation. When men band themselves together to produce a given commodity for the market, or to buy and sell and share in the profits, it is conscious coöperation. The various productive and distributive coöperative societies, firms, banks, railway corporations, and manufacturing corporations are illustrative of this kind of coöperation. It is evident from the foregoing that industrial society is very complex and that all are in one sense serving one another, notwithstanding the real competition that exists.

67. The Influence of Modern Invention. — The complexity of society has been greatly increased through the influence of modern invention. Life was simple indeed, when each procured his own food, clothing, and shelter independent of others. Gradually interdependence of members of society came about. Yet, it was not until the application of science and invention to the industrial world that the changes in this respect began to appear. The application of steam and water power to machinery, and more recently the use of electricity, have wrought the principal changes. The modern advancement of chemistry and metallurgy and other applications of science to extraction and production have advanced rapidly the

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production of wealth and transformed the social processes. Modern methods of mining have enormously increased the output and use of the metals; the use of clay and the rare earths have brought about wonderful changes in the arts of life. The gas mantel has revolutionized the method of lighting; the manufacture of cement is changing the method of building; the large use of natural gas and oil have in many sections transformed industry.

68. Relation of Scientific Discovery to Industry. — It is to the scientific laboratory that we look for new processes of treating minerals and earths; for the new applications of electricity and other motor powers; for the discovery of refined processes of manufacture, and for the appliances for the advancement of human welfare. While many inventions and discoveries of the past have been brought about by accident or necessity, the modern world looks to the scientific laboratory as its source of improvement. But invention in government, in law, in religion, in social organization, in industrial organization, keeps pace with scientific invention and discovery and their application to industry.

69. Transportation. — Industrial life has been changed by the modern methods of transportation. The great steamship lines and railway systems encircling the earth furnish ready transportation for all the products of the earth and facilitate the travel of millions of people from place to place. The products of all climes may thus find their way into the small interior town and men may change their residence at will. So complete have become the exchanges of goods that transportation has become an essential feature of modern business. Con-

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stant effort is being put forth to reduce the cost of transportation by means of steam, electricity, and improved waterways. We are entering an electrical era of transportation, and soon a network of electric lines will cover every civilized country. To what extent it will replace steam cannot be foretold.

70. Communication. — Increased facilities for transportation makes it possible to carry the metropolitan daily paper to the hamlet and the farmhouse and thus acquaint one part of the world with events taking place in all others soon after they occur. The telegraph which became essential to modern business is now supplemented by the telephone and the wireless telegraph, and renders the dissemination of knowledge well-nigh complete. The advantages of rapid communication to business, by acquainting all with the condition of the world's markets and quickening the movement of trade and industry, cannot be estimated. Moreover it serves to bind the world together in an industrial unit and to harmonize the complexity of industrial life.

71. Organization of Industry. — With the improvement in facilities of production, transportation, exchange, and communication, has come the organization of industry. Gigantic enterprises are carried on in mining, manufacturing, and the development of the resources of nature. This could not be carried on without organization. Captains of industry with managers, superintendents, overseers, and armies of laborers who make up the rank and file of industry are necessary. These are completely organized from the man at the head who controls millions to the office boy who runs errands. In the great army

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every one has his place and his specific duty to perform. Each organization has a definite business relation to all others of similar nature. Likewise each local business center has a relation to all business centers, and the local market is absorbed in the organization of the world's market.

72. Corporations and Trusts. — The trust is an essential outcome of the unrestrained competitive system. It is a product of industrial evolution. First the business firm was established by people who combined their capital and services for an expansion of business enterprise. As this mode of business became large, it was incorporated in part for the protection of its business, but more especially for the protection of people with whom it did business. As business enterprise enlarged, the corporation became great, and with power came selfishness and to a certain extent irresponsibility. Then the sharp competition of corporations with one another caused them to combine to fix prices or to crush out competition. As industrial war was destructive, a corporation of corporations, or trust, was formed. Industrial development outran legal restraint and as a consequence the trust became a menace to trade and industry. Attempted regulation by law forced the trust, with its loose construction and its irresponsibility, into a gigantic corporation whose business is counted in hundreds of millions, when the old counted its enterprises in thousands of dollars. The secret power of the great corporation is its monopoly of business and its method of crushing out competition or doing business at the expense of other forms of business. The influence of organized capital in the control of the industrial enterprise of the world has been constantly increasing.

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73. **Labor Organization.**—To protect itself against organized capital, skilled labor has organized. It seeks to advance wages, shorten hours of labor, and insure protection of its members. It is a species of monopoly as it tries to control the labor market within a given field and to fix the price or wages of labor. To attain its ends it tries to keep down competition in a given territory. Laborers endeavor to meet the monopolistic power of organized capital with the monopolistic power of organized labor. While they realize that capital is essential to modern productive processes, they know that nothing can be done without labor. They insist that capital has received more than its just proportion of the reward of industry and wish to force a larger return to the laborer. Thus two forces mutually essential are made apparently antagonistic. While it must be admitted that the organization of capital is essential to industrial life, and that labor has a right to organize and is benefited thereby, the conflict of these two great elements has become a burden to the consumer and to the business world at large. In the adjustment of economic relationships, this antagonism must cease to be destructive of the welfare of industrial society.

74. **Organization of Finance and Trade.**—No other aspect of industrial society shows more clearly the genius of modern business than financial organization. The accumulation of the surplus wealth in the form of money makes it available for carrying on extensive industrial enterprise. The banks are founded independently, but so complicated and delicate are the methods of exchange that they work together harmoniously and sympathetically in the support of the financial enterprises of the world.

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They represent the nerve centers of business, and that which seriously affects one center is communicated to all of the rest. The clearing houses in the commercial centers handle the surplus credit paper of the whole industrial world. As money exchange becomes a crude method for large and world-wide exchange, the credit system takes its place. So that about ninety-five per cent of the business of the world is done through the credit system. It bears the same relation to the commercial world that steam power and electricity do to the industrial world. The commercial system permits the complete organization of finance and trade and further increases the unity of complex economic life.

75. The Social Condition of the Laboring Population. — Judging from the material and immaterial things that the laborer has to enjoy, his present social condition is greatly improved in comparison with former industrial periods. Wages of skilled labor have kept in advance of the cost of living. Shelter and home comforts have increased. The organization of unions has tended to elevate the laborer socially. The introduction of low-grade and unskilled labor into communities through immigration has been a detriment to social conditions. The flow of labor from one country to another is in general beneficial when it follows the economic law of supply and demand, but when urged by competing steamship lines, and the inducements of great manufacturing and mining corporations who are seeking a cheap labor, it may prove a great detriment to the laboring population, and, indeed, to the nation. Labor pays its own way, and when the change of population is not too rapid, it creates wealth by

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developing the resources of the country into which it flows.

The facilities for education of the laboring population, the protection of women and children by wise factory laws, the facilities for travel, the improvement in dwellings, the making of parks and playgrounds, the summer outings for the children of laborers, the work of wise philanthropy, the larger activities of practical Christian workers, and the increase in temperance, are evidences of improved social conditions. Yet in the face of all this, over-crowding population in large cities has brought much misery and degradation. Thousands are without a living wage.

76. The Shadow of Great Wealth.—The greatest human misery of to-day is found in the shadow of great wealth. In many instances wealth is accumulated at the expense of the laborer. In the long run this will be a detriment to wealth creating, for profitable and progressive industry demands a well-fed, well-cared-for, and contented laborer. But many capitalists and business managers possessed of insatiate greed for wealth care only for wealth regardless of the laboring population or the welfare of the community at large. The competitive system, without restriction, permits a few pirates of industry to take advantage of the laborer's extremities and rob him of his just dues. If wages are good, their effect is frequently lost by irregularity of work caused by shutting down the factory or closing the mine by operators who are afraid that a surplus of goods will cause prices to fall. It is difficult to see how the system may be properly adjusted unless the producers shall be content with a smaller margin of profit

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or the consumers shall be willing to pay more for goods so as to give to the wage earner a fair proportion of the product of industry. There is wealth enough created to make everybody comfortable, if the system were properly adjusted. Much of the difficulty is with human nature, an element difficult to control. Much of it comes from an imperfect industrial system. To improve the former and adjust the latter may be accomplished by degrees through the triumph of industrial justice.

77. The Relation of Industry to Politics. — The political life has more and more to do with industrial affairs. The great problems of modern society are industrial. Legislatures and courts spend much of their time in the attempt to regulate industry. The majority of important laws in recent years have involved some great economic problem. The large body of laws regulating and protecting labor, those regulating commerce and trade, the multitude of government commissions to look after industrial and commercial affairs, are indications of the economic trend of legislation. The great corporations have their lobbies in nearly every statehouse to influence legislation in their behalf. The labor organizations are urging legislation for their protection. The problems of industrial life have reached such an acute stage that it would seem that no one was fit to sit in legislative halls or upon the judge's bench who was not well grounded in economic principles and industrial affairs. Indeed, our politics is becoming industrial and our civil procedure economic in nature.

78. The Social Paradox. — In the first decade of the twentieth century people are experiencing a great social unrest which is becoming revolutionary in its nature.

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While the movement is less violent and spectacular, it is no less decided in action nor important in consequence than the religious revolt of Luther or the French or the American Revolution. Thus far the revolution has proceeded quietly and in order, without violence and bloodshed, and it will doubtless so continue if the leaders in politics and business are mindful of the great public interests of the country.

The central aim or purpose of this movement is the achievement of economic liberty and economic justice. It is a revolt against industrial oppression and "benevolent feudalism." The social difficulties to-day center around the methods of production and distribution of wealth. The real cause of the difficulty is the real or supposed injustice in the unequal distribution of wealth. It is a struggle for a higher standard of ethics in the business world. It is an attempt to apply the principles of freedom and justice already achieved in religion, in politics, and in science, to the business and social world.

Evidences of this struggle are observed in the cry for a "square deal," the regulation of the relations of labor and capital; the agitation for railroad regulation; the passing of the pure food bill and the rate law; the regulation of trusts; the demand for a fair ballot, and in the revolt against all corporate greed. On the other hand, the tremendous gains of socialism, the great influence of the social agitator, and the growing distrust of government by the labor population are evidences of an unwholesome discontent.

In the attempt to regulate the social affairs by general law, we are confronted by a social paradox or the apparent

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conflict of two deep-seated principles of human conduct. In the first place, each individual, according to nature, habit, and social recognition, must look after his own interests. He entered the struggle for existence as an animal, he carried it on as a human being, and he continues it in modern times in the struggle for wealth. Primarily, he must look out for himself even though his fellows perish: therefore he competes with them in the race of life, in the struggle for existence, and in the accumulation of wealth. This method follows the law of organic evolution of the survival of the fittest. Carried to the extreme, it is common to the wolf and the tiger and is without any ethical principles.

The other side of the paradox rests in the fact that the human species could not survive without coöperation. When man ceases to work for the interest of his fellows, the race is doomed to destruction. He is put in a position of competing with his fellows individually, but should his competitors perish he would perish with them. The very men that he is apparently working against are essential to his welfare, indeed, to his salvation. The struggle of modern social life is an attempt to settle these two apparently antagonistic forces. Where is the line of demarcation between individual effort on the one hand and social effort on the other? This is the question on which the real issue of modern times rests. If everything should be turned over to extreme individualism, the qualities of the wolf and tiger would predominate; a state of political and social anarchy would prevail, and society would destroy itself. On the other hand, should individualism be suppressed, and collectivism prevail, human progress and

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human happiness would decline, and eventually the human race would degenerate.

The solution of the problem rests in the fact that it is possible for a man to be working for his own best interests and at the same time be working for the best interests of his fellows. Individual effort may be so regulated and controlled that community interests shall be conserved and advanced. Competition may be constructive or it may be destructive of social order. Constructive competition may secure the individual interests and at the same time conserve social interests. Thus, competition in itself is a social blessing, but to be beneficial it must be just. It must combine the elements of coöperation. If men compete on one plane, they must coöperate on a still higher plane.

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BOOK SECOND
PRIVATE ECONOMICS

PART I
CONSUMPTION
CHAPTER IX

THE SATISFACTION OF ECONOMIC WANTS

79. Human Desires the Foundation of Economic Society.—The satisfaction of natural and artificial desires is the first cause of economic activity. While the science of economics is built upon the production of wealth, and the material activity of life apparently consists in this, the real object of this activity is the satisfaction of economic wants. What one sees is the labor, the competition, the ceaseless activity of man in the accumulation of wealth. Back of all this is the real motor power of progress, the satisfaction of human desire. The ultimate cause of economic life is thus traced to a psychological cause. Primarily, the first important desires, and those that have been constant factors in the development of economic life, are the desires to escape the pain of hunger and cold. For this, man has toiled to procure food, to increase the productive power of land, to build houses, and manufacture clothing. From these have radiated a thousand artificial desires more or less related to the primitive activities. By

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increased labor human wants have been created, causing excessive toil in their satisfaction.

80. The Effect of the Desire for Food. — Let us consider for a moment what influences have been wrought by the simple desire for food. First of all, the vast agricultural activities of the country have been developed for this. The demand for vast amounts of agricultural machinery necessary for the tillage of the soil has caused the creation of implement factories. These in turn have caused the demand for metals from the mines and wood from the forests, causing two new industries. These dependent industries have employed an army of men and a vast deal of capital. The preparation of the food demands an army of cooks, and stoves and kitchen furniture. The preparation of the food for the market requires sacks for potatoes, rice, and sugar, barrels for apples, tubs for butter, and boxes for eggs. To transport the agricultural products from the farm to the market, requires horses and wagons, railways and steamships, calling into service new groups of laborers. Thus the simple matter of procuring food develops complex and varied industries.

81. The Desire for Clothing and Shelter. — To protect the body from cold, clothing and shelter are necessary. In obtaining the former, wool, cotton, flax, and silk are produced, and these make new demands upon the agriculturist. Spinning, weaving, and manufacture of garments bring into activity new industries, with all of their accompanying demands upon other groups of laborers. The styles of clothing become essential, and artists of fashion are brought into the productive scheme.

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Likewise the desire for shelter develops a new line of economic wants. The building of dwelling houses, stores, warehouses, and public buildings, brings into action a multitude of groups of people of separate industries. Miners, foresters, manufacturers of lumber, cement, iron, and other products, masons, brick layers, carpenters, architects, and builders with other dependent groups are brought into economic activity. And again, merchants, transporters, and traders are called into service to help place the goods in contact with consumers.

82. The Home Life. — Among the fundamental desires that have created the ceaseless economic activity is that for the home life. About the home have clustered many of the tenderest and best of social activities. Homes are built and decorated. Artistic taste demands a new line of activities. The desire for the æsthetic in home decoration and in clothing is not essential to the life of man, but its satisfaction is essential to modern civilization. The making of artistic furniture, wall decorations, pictures, and ornaments for the home employs an army of laborers. The decoration of the body, the demand for jewelry, and the products of the cosmetic industry have developed other groups of skilled laborers.

83. The Desire for Education. — The intellectual forces are essential to the intense activity of the industrial life. Hence, men spend millions of dollars, which means a demand for armies of workers, in training the mind and advancing science, and this increased mental activity turns the wheels of industry. More than this, the ideal of culture increases the demand for universities and schools and other means of advancement. But increased education multiplies

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the number of unsatisfied desires, and the economic world puts forth renewed energy to satisfy them. Thus the economic world is quickened at every turn by the active desires of the mind and body of man.

84. Desire for Religious Culture. — There appears to be no direct relation of religion to the production and consumption of economic goods, but the development of religious ideas has made a demand for churches and church furniture; and the development of religious ceremony has called for a large number of religious teachers and preachers who help to preserve and increase the labor power of the community, and in turn, by demanding economic goods for services, create a new demand for economic activity.

85. The Demand for Wealth. — By wealth is meant economic goods. But the great struggle for wealth is a struggle for an excess of these goods, that other desires than mere consumption of food and clothing may be satisfied. Wealth is demanded because it satisfies economic wants. It is not money that men wish, but the things material and spiritual that money will furnish. Moreover, wealth procures social standing and furnishes the opportunity for public approbation. It gives means of improvement: it furnishes culture and travel as well as the conveniences and comforts of life. It is the struggle for wealth that causes the great industrial organization of to-day. Banks, railways, factories, mills, and mines with their organized groups of managers and the multitude of laborers are but part of the machinery for the production of wealth. Labor organizations have been brought into existence because of the system of economic production.

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86. The Demand for Social Order. — To protect the rights of individuals as well as their persons and property, it became necessary to establish a system of government. This demands large numbers of officials, a standing army, and a navy. These necessitate the building of courthouses, jails, arsenals, forts, etc. In an economic way, the people combine to build bridges, roads, and to develop the resources of nature. Social order is essential for the protection and development of society. But it was mainly for the protection of wealth that the social order was fully developed. Even the government revolves around the economic life. Legislation in recent times has far more to do with industrial life than with any other subject.

87. Complex Economic Life. — While the attempt to satisfy all human desires and needs has led to the development of a complex industrial life which mingles all inter-dependent social relations, political economy has to do primarily with the production of material goods to satisfy economic wants and to procure the services of men in return for this satisfaction. Economics has not for its scope the satisfaction of all human needs, but its province is to consider the consumption, production, and distribution of wealth and the organization of industry attendant upon these processes. Wealth is its material, and economic social well-being its ultimate, object.

88. Consumption of Economic Goods makes a Demand for their Production. — While goods cannot be consumed until produced, it is the demand for consumption that has caused the building of economic society and the development of economic organization. While wealth production is the central idea of economics, consumption is the

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pivot on which the wheels of industry turn. For instance, if no one demanded shoes, there would be none manufactured. What one sees is the factory making shoes and the merchant selling them. But before the leather is purchased or the labor employed or the shoes made, the manufacturer first estimates the demand for the goods. In the fall, the retail merchant estimates the number of shoes he can sell in the spring, and the manufacturer receives his order six months before the goods are to be delivered. So for every other industry—the farmer, the manufacturer, the railway, the banker, make an estimate of the demand for goods based on the probable consumption before they begin to produce. When there is no longer a demand for goods at a fair remuneration, they will cease to be produced.

89. Interdependence of Economic Society. — It will be seen, then, that the great industrial groups that appear so independent are really dependent upon one another. The manufacturer depends upon the farmer, and the farmer in turn upon the manufacturer, and both upon the banker, who is also dependent upon others. Laborer and employer, manager and capitalist, are mutually interdependent. While all are apparently in competition, they are essential to one another's success. There is an unconscious coöperation of all classes in the production and consumption of wealth. There is a conscious coöperation of many groups in the production and exchange of wealth. The great organizations in banking, exchange, trade, transportation, and manufacturing have for their purpose the production of wealth. The competition in modern life is centered more in the distribution of wealth than either in production or consumption. But society has become

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so closely organized that the interests of the community and the individual are one.

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CHAPTER X

NATURE OF CONSUMPTION

90. **Consumption regulates Production.** — The amount of goods consumed is in one sense a record of the degree of satisfaction of wants, and as demand always springs from a desire to consume, in modern economic processes the amount manufactured will depend to a large extent on the amount demanded; hence, consumption limits production. While no goods can be consumed until they are produced, and the mechanical process of production precedes consumption, yet because of the desire to consume goods for the satisfaction of wants, consumption stimulates production. This principle may be observed in the causes and processes of panics. As soon as consumption falls off, or, indeed, as soon as a distrust arises that people will not consume what is produced, production ceases and there follows a trade depression. In the revival from panics it is the desire of goods, or consumption, which starts the wheels of industry. So important is this question of consumption in relation to production, that some authors have laid it down as the first principle in economics; however, it is only through the law of supply and demand that it takes precedence.

91. **Consumption is Inseparable from Production.** —

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Whichever way consumption may be considered, it is inseparable from production. The whole economic structure rests upon the principle of the satisfaction of human wants. The effort of mankind to obtain material objects or goods, or the services of others in satisfaction of wants is the fundamental principle of the science. In the satisfaction, then, of these material wants, we find the formal basis of active life. The primary basis is the satisfaction of the merely animal wants, such as food, drink, clothing, shelter; these are the things that men strive for everywhere. As man's nature evolves, he finds it expanding into a thousand wants and desires, built upon the economic life as the formal basis of the superstructure of civilization. Men toil to satisfy the wants of religion, to promote the moral nature and the æsthetic faculties. Considering the social conditions of mankind, we find this idea expanding into railroads, highways, sanitation, education, public parks, institutions for the care of the weak,—indeed, into all public needs which must be met by economic activity.)

92. **Variety of Human Wants.**—In the savage state man's wants are few, but it takes his entire life to satisfy them. (As civilization increases, desires multiply, wants become innumerable, and renewed effort must be put forth to satisfy them. By increased intelligence, which enables man to use the power of invention and to apply the forces of nature, he is enabled to multiply the means for the satisfaction of wants.) We seek everywhere for the qualities embodied in material objects to satisfy our needs. We also seek the personal services of others. We desire food and clothing and objects of art and beauty, and so, on the other

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hand, we desire to travel and to employ the services of others in conveying us from place to place.

93. Degree of Want. — Each individual arranges his wants in the order of their importance, but the degree of importance of the wants of different individuals varies. The chief desire of one man may be for a coat, of another for warm food, while the chief demand of a wealthy person may be a thousand-dollar painting or a five-thousand-dollar horse. (The degree of intensity with which people desire certain things has a vast deal to do with the regulation of the kind and amount of consumption, as well as the establishment of the prices of products.) As civilization progresses, there is comparatively less time spent in obtaining the bare necessities of life, such as food, clothing, and shelter, and more, proportionately, in obtaining those things which lead to intellectual culture; that is, more spent in the development of the derivative qualities of mankind. In an actual social organization, education, art, and literature may not be essential for the perpetuation of life or to the perpetuation of the species, but they are essential to the higher development of the individual and of social life. To that extent culture is desirable, for it produces a better life and a better class of people.

94. Satisfaction of Economic Wants. — In Political Economy we have to deal with only the satisfaction of economic wants, chiefly material goods. Such goods as nature has furnished in abundance, like water, air, and sunlight, are not economic goods, because they are not subject to the processes of economy. However, these have a tendency more and more to be appropriable in service or material. For example, water in the cities has become

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an economic good; also, for the purpose of irrigation, it is bought and sold. It may be that the service performed is the chief consideration, but in reality it is the furnishing of the economic good that determines the economic condition. Air pumped into mines and tunnels may become an economic good as it is bought and sold in the market, and has, under such circumstances, an economic value . the same as food or clothing. If sunlight should be concentrated so as to run engines, power might be developed in that way, and sun heat would become an economic good. Electricity, which is free to all everywhere, when generated and transmuted into power, becomes an economic good, and electrical power is bought and sold. (So we shall find that in the process of development man enlarges his sphere of activity from time to time, and the list of purely economic goods becomes enlarged, and goods which were formerly free become economic.)

95. Immediate Consumption and Final Consumption.

— All goods are produced for the sake of consumption. Some of these are for immediate consumption in the gratification of wants, such as food for the sustenance of life, or raw material for the production of other goods, as coal. Final consumption is the last use of an article, and means the last use it is put to in the development of the economic process. Thus, trees are consumed in furnishing lumber; lumber passes through the planing mill and subsequently is made into articles of furniture. But the use of the furniture is the last use or final consumption of the lumber, and its final consumption represents the destruction of the utility. Again, the consumption of wealth is necessary for the production of other wealth. Thus, that portion

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which is set apart for the furnishing of means for producing other wealth is called capital. Its object is production, and it is to be consumed in the process.

96. Productive Consumption. (Productive consumption is that in which the value reappears in the utility of the finished product. Thus, coal used in creating power passes through the process of being consumed and reappears in the value of the finished product.) The coal which is used for heating purposes only is consumed in the final act; it has served its economic process there. But the economic process in production is entirely different. Many goods serve as raw materials in the manufacture of finished products; also tools and machines are consumed in the production of other articles, the ultimate aim of the whole process. The consumption of goods by the laborer is sometimes said to be productive consumption, but this can only be true in the case of the consumption of such articles as are a necessary part of the process of production by the laborer. For consumption by man is the aim of all production; when goods have been consumed thus, their economic purpose is fulfilled, unless otherwise intended.

97. Consumers' Profits. — In consumption all are looking for the largest use of material goods. Producers create goods for the purpose of selling in order that they may realize a margin of profit. The consumers buy them in the cheapest market with the expectation of obtaining some advantage in buying. There is always competition in buying as well as competition in selling. While those selling hope to make good terms for themselves, those buying desire to retain the advantage on their side. Thus,

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competition tends to reduce the purchasing price, which would yield a profit to individuals. All distributive co-operative institutions have for their purpose the making of profits, which arise from careful purchasing by the consumer.

REFERENCES.—See the following chapter.

CHAPTER XI

CONSUMPTION AND SAVING

98. **Analysis of Consumption.** — It is held by some that consumption, being essentially an entire destruction of utilities, is always accompanied by a saving process or economy of expenditure. Hence, people are always seeking the most advantageous use to which wealth may be devoted. They wish the largest return possible of money expended, and try to make the articles purchased last as long as possible. In manufacturing, this same economy exists in the concrete processes of production. However, in the use of raw material its transformation into the finished product is made as rapidly as possible, while the machine that does the work is made to last as long as possible. (There could be a better ordering of the methods of consumption without any real retrenchment in the amount consumed, but it requires a careful study as to what should be used. Ordinarily, consumers are very deficient in the art of buying and the economy of use. Economy in consumption is a very important subject; and by that we do not necessarily mean abstinence or niggardliness, but a careful and thoughtful study of how to get the largest return for the expenditure.)

99. **Engel's Law.** — A careful study of the statistics of consumption shows that there is a relative order of

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expenditure for different individuals. Various investigations have taken place in Europe and America to show the relative per cent of income expended in the different ways for food, clothing, rent, fuel, etc. The first definite results of investigations were published in 1867 by Dr. Schwabe, chief of the Municipal Statistics Bureau of Berlin, on the relations between rent and income. The following table summarized his results: —

When the Income is :	Then the Expenditure for Rent is:
900 marks	216.09 marks, or 24.10 per cent
1,500 marks	231.65 marks, or 22.10 per cent
2,250 marks	450.00 marks, or 20.00 per cent
3,000 marks	825.50 marks, or 27.50 per cent
4,500 marks	1,052.55 marks, or 23.30 per cent
6,000 marks	1,203.60 marks, or 20.56 per cent
9,000 marks	1,566.00 marks, or 17.40 per cent
15,000 marks	2,020.50 marks, or 13.47 per cent
30,000 marks	2,760.00 marks, or 9.20 per cent

This social law, which states that "the greater the income, the smaller is the proportion expended for rent," has often been called Schwabe's Law. Later, Dr. Engel, of the Royal Prussian Bureau, extended this "social law" to all the necessities of life, and in its more expanded form the law is usually called "Engel's Law."

As income increases, the relative expenditure in the different lists changes; but there are certain constant laws of relations of expenditure derived from statistics. These are mainly as follows: First, the law of constant percentage: as income of the family increases, the percentages of expenditure for clothing remain approximately the same, and expenditures for rent, fuel, and light remain invariably the same. Second, the law of variation: as

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the income of the family increases, a smaller percentage of it is spent for food and a steadily increasing percentage is expended for education, health, recreation, amusement, etc.

In a large number of cases in Germany it is shown that the per cent spent for clothing ranges from 16 to 18, in Europe 14.8 to 19.8, while in the United States the clothing expenditure ranges from 12.82 to 16.84, showing a slight variation in the changes of income. While the expenditure for rent in the United States is from 12.59 to 15.98 per cent of the income, it is from 9.38 to 11.93 in Europe. It is seen by this that the subject of rent varies somewhat, though it may be regular enough with clothing to be included in the constant or relatively constant laws. The amount of food used varies from 50 to 62 per cent of income in Germany, 44 to 50.06 per cent in all Europe, and 28.63 to 49.64 per cent in the United States. The following tables illustrate these laws. They also point out a great lesson in social economics: that the wants of higher civilization caused by education and a higher standard of life are not satisfied with the present economic or industrial system. Yet the ordinary family still has insufficient income over the bare necessities to satisfy desires to the extent of producing happiness and contentment. If the individual is to satisfy common wants and to have a margin for the satisfaction of extra desires, the reform should begin with consumption.

It will be interesting to study the following comparative percentages of expenditures of the families of workingmen in Illinois, Massachusetts, Great Britain, and Prussia:—

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PRUSSIAN STATISTICS; ENGEL'S LAW

Items of Expenditure of a Family of the Middle Class	Percentage of the Expenditures of the Family of a Man with an Income of from		
	\$225 to \$300	\$450 to \$600	\$750 to \$1000
Subsistence	Per cent	Per cent	Per cent
	62.0	55.0	50.0
Lodging	12.0	12.0	12.0
Clothing	16.0	18.0	18.0
Firing and lighting	5.0	5.0	5.0
Education, public worship, etc.	2.0	3.5	5.5
Legal protection	1.0	2.0	3.0
Care of health	1.0	2.0	3.0
Comfort, mental and bodily recreation	1.0	1.0	3.5
Total	100.0	100.0	100.0

PERCENTAGE OF EXPENDITURE FOR FAMILIES OF DIFFERENT INCOMES

Object of Expenditures	Income under \$200	Income \$300 to \$400	Income \$500 to \$600	Income \$700 to \$800	Income \$900 to \$1000	Income \$1200 and over
United States	Per cent	Per cent	Per cent	Per cent	Per cent	Per cent
Rent	15.48	14.98	15.15	15.60	14.96	12.59
Fuel	7.07	6.04	5.63	4.42	4.00	2.57
Lighting	1.01	.98	.97	.88	.74	.45
Clothing	12.82	14.14	15.27	16.33	16.84	15.71
Food	49.64	45.59	43.84	38.89	34.34	28.63
All other purposes	13.98	18.27	19.14	23.88	29.12	40.05
Europe						
Rent	9.38	11.93	10.26	9.49	10.49	
Fuel	5.38	5.49	3.32	3.97	5.19	
Lighting	1.66	1.59	1.37	1.20	1.53	
Clothing	19.08	14.18	15.21	18.97	14.15	
Food	48.32	49.58	50.06	44.00	46.24	
All other purposes	16.18	17.23	19.78	22.37	22.40	

¹Should be 2.5 to make even per cent.

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Items	Illinois	Massa-chusetts	Great Britain	Prussia	Average
Subsistence	41.38	49.28	51.36	55.00	49.25
Clothing	21.00	15.95	18.12	18.00	18.27
Rent	17.42	19.74	13.48	12.00	15.66
Fuel	5.63	4.30	3.50	5.00	4.61
Sundries	14.57	10.73	13.54	10.00	12.21
Total	100.00	100.00	100.00	100.00	100.00

While the table shows in a rough way the comparative percentages of expenditure, in another way it determines but little. Take the item of subsistence, for example: it is not shown whether the family in Great Britain that expends 51.36 per cent of the income for food is better or worse fed than the family in Illinois that spends 41.38 per cent for the same, but it shows that the largest item of expense in Great Britain is food. The table shows that rent is a greater item of expense in Massachusetts than in Germany or Great Britain, but does not show how the family lives. While there is a tendency everywhere for a family of certain grade to seek the same relative home comforts in proportion to income, it is not sufficiently constant to show any positive relation. Are rents higher in Massachusetts than in Great Britain for the same quality of house?

100. **Inducements to Save.** — Inducements that persons have held out to them for saving are, that the same articles may be consumed in another way, yielding a larger amount of satisfaction. When the standard of life is once established, it requires a certain amount of various articles to satisfy it. If the standard is raised, there must be a larger expenditure in certain lines for its satisfaction. Economy in this respect consists in saving from useless or needless

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expenditure, with the expectation of receiving a larger benefit from the goods expended in some other way.)

101. *Spending and Saving.* — There are those who hold to the doctrine that spending should be practiced freely in order to make times good; that is, the more we spend, the greater will be the circulation of money and the better will trade be. This, however, has its limitations. Money expended in the gratification of rational wants, it is true, will lead to rational production and proper consumption; but money or wealth expended in uselessness may create as much evil as good, and if all were to squander alike with prodigality there would be no wealth used for the purpose of carrying on the processes of production. In its general use luxury is a relative term, but in an economic sense it must be confined to extravagance and prodigality. There is no general law telling what luxury is, for luxury to one person might not be luxury to another. The luxuries of one individual may be the commonplace articles of another, and the luxuries of one generation may become the necessities of the next. The money that is expended in riotous living is a direct waste, and the money that is expended in excessive luxury might be used in such a way as to bring a larger return to society. The millionaire's palace might build a hundred good homes for people of ordinary means and taste, and it is a question whether the owner of the palace demands any such outlay, or whether, indeed, it is necessary for his best interests. Viewed in this light, it appears that much of the expenditures of life are useless. The luxurious wine supper cannot yield a sufficient pleasure for the amount of waste incurred, hence it is a luxury. Whisky, beer, and tobacco are worse

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than luxuries, — they are a waste, because of the evil effects on the body. (The wants of a community are never satisfied, for as we go on developing we increase the number of our unsatisfied desires, which are limitless. Luxurious expenditure can only be justified when results are obtained in proportion to the sacrifice.) A man might burn a house for the sake of amusing himself with the play of the flames, but it is evident that the small amount of gratification has cost a very large expenditure, and is out of all proportion to real economic consumption.) Though the house were his own, he would violate moral obligations in consuming materials which had cost years of labor and might be made useful in many ways.

102. Economic Expenditure and Waste. — The person who, having to consume useful articles, does this in a careless and wasteful manner, violates his moral obligations to the community. Hence, (the human race would be greatly benefited if we could have economy of food consumption. Now, economy of food consumption does not mean that the body should be stinted, but only means that economy should be used in the selection of food and in its proper preparation and use. Thus we should have the largest return for the expenditure. (This is what is meant by saving; it is not hoarding articles for the purpose of gratification of bare possession, but for the purpose of seeking out the largest return for goods in hand.) Therefore, when persons put money in savings banks, it is for the purpose of getting a larger return in some other way than by the gratification of present desires.) If a person refrains from buying a hat when he does not really need it, it is for the purpose of spending the money for some want

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yet unsatisfied. Hence, saving is a relative term, and economy is economy in use. In the use of food, for instance, there might be selected expensive foods containing little real nutriment; or, foods might be selected which would not satisfy the wants of the family; or, food could be wasted, badly prepared, or thrown away; and, again, there might be a great deal of expensiveness in its preparation. All of these things are absolute waste.)

103. **The Desirability of Saving.** There are very many reasons why saving represents an economic advantage. It teaches the individual thrift and frugality, including habits of caring for himself, which is an insurance against the destruction of labor by poverty and sickness. It is an insurance against reverses in business, which tides the individual over in times of apparent stress, but it also enables the use of large amounts of wealth in a productive enterprise which otherwise would be consumed at once. Nevertheless, the question of saving may be carried too far, for if one continues to save to the detriment of his everyday business or his everyday work, it may be in the long run a hindrance to economic progress.) Sometimes saving is carried on to the extent of impairing a business by diverting free capital from one channel into another. Examples of this kind are found where excessive life insurance is taken, or where a business is entered which requires excessive payments or assessments.

(It is sometimes argued by individuals that it is a good thing to spend, because it puts money into circulation and makes times good. While this is not a good argument taken as a whole, there are elements of truth in it. A community may be crippled by diverting free capital into chan-

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nels for the purpose of yielding an ultimate benefit, but which in reality is at an expense to prosperity. If there is a large amount of manufactured goods on the market, the consumption of these goods will have a tendency to quicken the wheels of industry in old established lines, and create a surplus of income which may be used to create new business. But if by strict economy living expenses were cut down one half, consumption falling off to the same extent, in order to save this amount from a given enterprise to expend in another business which would take years for an income, it is plain that the community would suffer loss. It is a good thing for a community to live well, to keep up the standard of life, for this is true economy. Such savings as may be had over and above this good living will not only be an immediate but an ultimate advantage to the community.)

104. National Consumption. (National consumption is a better estimate of national prosperity than national production, if different groups of individuals are considered. It is what an individual has and enjoys that estimates his standard of life. When we say that the per capita wealth of the community is \$1000, we mean that the accumulations or savings of wealth amount to that much. Now, in what form do we find this wealth? It is in money, lands, houses, furniture, clothing, books, machinery, implements, etc. It means that we have that amount at hand not consumed. Nevertheless, nearly all of this is in the process of consumption. If all of these goods could be stored in a warehouse awaiting the use of the people, and there was no demand for them, it is easily seen that the wealth of the community would be small. It is through

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consumption that the value of all goods is estimated. If consumption were to keep up with production, day by day, there could be no such thing as national wealth, and from the fact that consumption does not keep up with production we have a surplus on hand which is called capital. This accumulation is dependent upon the excess of production over consumption.)

It still remains true that (the prosperity of a nation is dependent upon the perpetual use of this wealth in legitimate consumption.) In other words, the condition of national consumption, that is, (the use of all the surplus earnings of a nation, will be an index of the national prosperity. Hence it is the height of economy to encourage legitimate consumption of goods. Therefore the legitimate consumption of wheat, corn, clothing, furniture, houses, and, in fact, all goods, will be an index of the prosperity of the nation.) Care should be used to discriminate between the large service of goods and the waste of goods. (Everything must be put to its highest possible use if we wish to reach the highest prosperity. If a large part of the surplus earnings of a community passes into savings, it may thereby curtail expenditure in such a way as to destroy the well-being of the community. While the encouragement of saving by individuals in the form of life insurance or laying up funds for future use may in the long run lead to greater opportunities for the support and production of life, yet even this may be overdone to the extent of destroying the working funds of the community and detracting from its well-being.)

In the United States, enormous consumption of goods has as much to do with the prosperity of the nation as the

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excessive industrial power which produced the goods. While the opportunity to consume goods must logically follow the production of the goods, it is after all the stimulus to production and the evidence of the well-being of the community. The following table illustrates the national consumption of certain classes of goods, in the United States, for the year 1906:—

Article	Production	Home Consumption
Wheat	552,399,517 bu.	510,985,324 bu.
Wool	295,488,438 lb.	542,062,536 lb.
Cotton	6,994,281,731 lb.	2,749,291,082 lb.
Sugar	584,888 tons	2,632,216 tons
Corn	2,464,480,934 bu.	2,377,202,894 bu.
Pig iron	22,992,380 tons (Calendar year 1904)	16,561,277 tons
Coal	314,562,881 tons	244,051,103 tons (Bituminous)
Malt liquors and distilled liquors	1,718,203,292 gal.	1,694,392,765 gal.

It is evident that the large amount of the consumption of liquors must be to a great extent a detriment rather than an advantage. And all the waste in the use of flour or meat in the home consumption should be considered in an estimate of well-being, yet the entire home consumption represents the possibility of well-being to the nation.

105. Reform in Consumption. — As consumption influences production, the improvement of economic methods will be more readily made by reforming our system of consumption. There is competition in buying or consumption as well as in selling, and the consumers who compete perpetually for lower prices influence manufacturers in making a cheaper article. A retail dealer in shoes was one day asked why he did not furnish a better quality of

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children's shoes. "Simply because," he said, "the people do not wish to pay the cost of their making. Children's shoes are defective in manufacture to a large extent, and as a child's shoe costs more than a grown person's shoe in proportion to the material in it, parents are not willing to pay the actual cost of a well-made child's shoe. They always ask when shown a certain grade, 'Have you something cheaper?' Then the dealer says to the manufacturer, 'Can you not furnish me something similar to this of a much cheaper grade, to supply the demand?'" And so the cheaper shoe is made.

Thus competition in buying is productive of adulterated goods in almost every line. Goods are made in these days to suit not only the volume of trade, but also the tastes of the consumer. If we demand substantial, well-made goods, in which there is no cheat or deceit, we must be willing to pay the cost of production with a margin for handling the goods. In other words, we must have healthy, well-fed laborers, working under a high standard of life, which means high wages and a fair price for the goods. Consumption can influence production to a considerable extent. It is not intended here to argue against the small cost of articles, for this is a blessing to the poor. The application of modern invention and machinery to the production of goods permits us to produce substantial, well-made articles at a low price and by fair wages. But the excessive cheapness of manufactured articles is to be avoided.

106. Sweating System.—There is what is known as the sweating system, or the method of taking articles to be manufactured in the homes or in small, dingy apartments, on a contract to do so many pieces at a certain very low

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price. The prices paid for labor are so low under such circumstances that work must be slighted in order that people who consume these goods will have a cheap article. In the long run, this cheapness is a detriment to both consumers and producers, as well as laborers. If it yielded an ample return to the consumer, there might be a grain of sense in forcing the producer to compel the laborer to create the cheap article designed. But this cheapness is of no benefit to the consumer, because it gives virtually an article without service at a low price. Consumers scarcely think of this when they go to the stores to purchase, with a tendency to beat down the prices of goods to the lowest notch, — that is, demanding cheaper and cheaper made goods. To avoid this, "consumers' leagues" are formed to purchase goods made by reliable houses where labor is paid full living rates, and to avoid the purchase of all sweat-made garments, which are created under the influence of poverty and wretchedness of low-grade labor.

107. Waste in Consumption. — It is a difficult thing to purchase goods properly in the market to satisfy our own immediate wants. Our wants are so many and so varied that with limited means we must weigh the possibility of satisfying first one, then the other. This is especially true among the poorer classes. They cannot always tell what they want the most, or if they can, in their purchases they frequently fail in getting what they want. To be a good purchaser in the market with modern competition, it is necessary to know what one wants, and then to estimate the ability to pay for it before the purchase is made.

But having purchased the article, its use for consumption is of even greater importance. Take, for instance, the

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food that is brought into the kitchen. In the first place there is lack of economy in its preparation and in its cooking, and finally in its actual consumption. The Americans are proverbially extravagant, wasteful people in this respect. It is said that they waste enough to support another population equal to their own. This comes about not entirely through carelessness, but through lack of knowledge and training in the art of consumption. A farmer will leave his implements out in the storm the year around, and then complain of hard luck. He will leave his cattle without shelter and poorly fed, and then wonder why he loses in the business. We waste in clothing by our perpetual change in fashion, and we wear our houses out long before their time, because we refuse to keep them in proper repair. And so for all that we use in life there is a waste in consumption.

It is not that we desire to have a small consumption of goods, for it is highly desirable that there should be a large consumption; but it is only through economy that we are permitted to have a large consumption. If Mr. A takes care of one pair of boots, he may have sufficient wealth to buy a hat or a coat which he otherwise would not be able to purchase, or else he may invest his money in a better way. With economy of the flour and potatoes already purchased, people might purchase in addition apples and other desirable things.

Great care should be exercised in the selection of inexpensive foods that have a large amount of nutriment and that are not easily perishable, and to avoid extravagant foods with little nutriment. The art of making palatable combinations of foods that suit family needs is not well

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learned. There is likewise a great waste in the preparation of food, and a loss in bad cooking, as well as in the method of eating. Experiments carried on by officers of the United States army at Omaha demonstrated that, by observing economy in all things, a laboring man could be well fed and satisfied on an expenditure of fifteen cents per day. Other signs of waste are seen in the needless destruction of kitchen furniture and the needless consumption of fuel. It will be observed that the economy of consumption should begin with the purchasing of articles for the household.

This principle is frequently carried into the process of production. Business firms seeking to enlarge their production and increase their income frequently lose because of their excess of expenditures, simply because their processes of consumption were imperfect. This waste of material is frequently found in every department of economic life. As business becomes more exact, there is greater care in consuming all of the material. The by-products in a gas factory or in a smelter frequently yield a large revenue. The saving of cotton seed, which formerly was wasted, adds much to the productivity of cotton fields. The large packing houses are good illustrations of the economy of consumption, for every part of the slaughtered animal is saved and turned to economic use.

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PART II

FACTORS AND PROCESSES OF PRODUCTION

CHAPTER XII

THE NATURE OF PRODUCTION

108. **Unity of the Economic Process.**—Production is the greatest fundamental economic process, although in a general way there is unity of all economic processes. The general divisions of production, exchange, distribution, and consumption are merely parts of one great life, and are made chiefly for the purpose of analysis and instruction. Actually, there are no distinct and unchangeable boundaries between these great divisions. The permanence with which they have been held to by economic writers has frequently led young students to wrong impressions of the true nature of underlying processes. A man may be a producer, an exchanger, a transporter, a consumer of goods, while at the same time he is a factor in economic distribution. While this unity of economic process is evinced on all sides, it is nevertheless true that persons specialize along certain lines of work. There are those who are manufacturers of goods; others who are producers of raw material; still others who devote their sole time to the service of transportation; and others,

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indeed, who are mere exchangers; while each and every one is a representative in the economic process of distribution. (It is convenient to recognize the process of the creation of wealth in any form whatever as production, and to characterize every other process of economic life by some special name, as exchange, distribution, etc.)

109. Character of Production. — Production consists in the creation of utilities, or, indeed, in the creation of economic goods or wealth. It consists in the transforming of raw material into forms of utility and beauty for the satisfaction of human wants. Primarily, it is the application of labor to what is termed nature, to make it yield a service to mankind. By nature is meant all those physical forces which can be used for the service of man and all those climatic and physical conditions which modify his environment. First of all we have land, which yields through its fertility vegetable foods to support the life of man and beast, and mineral products from underneath the soil.) In this connection, too, we have water, which yields the service of sustaining life, enables us to transport goods from one place to another, and yields a force with which to propel machines. We have another form of nature, which is also used as a propelling force, primarily, — the muscular strength of animals which have been domesticated for man's service. And finally, through man's inventive genius, we have the use of steam and electricity, two of the greatest forces of nature.

(We have also inorganic substances, the components of the earth's crust, which are included in what we call raw material. Building stones, clay, limestone, chalk, salt, coal, and petroleum, and other sources of wealth,

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when once converted into useful products, make up a large proportion of the wealth of the community.

We have also organic substances, which are found in the forest already produced by nature in plants and vegetables of every variety, which are made available by the process of labor. The whole work of production consists only of changing the place or the form of material. Man has always brought to his aid, through his inventive genius, tools and machines to supplement his lack of muscular force. Beginning with muscular force, he has domesticated the animals and added their service to his own limited ability. He has harnessed the winds and the water, and thus increased the active forces. He has utilized the expansive power of steam and other vapors and gases; he has utilized the principles of heat and electricity, and thus added to his own great productive power. How far he will continue in the increase of his power of production yet remains to be seen. Whether or not atmosphere, heat, and ether may not yet be added to electricity and steam in different forms, and these, accompanied with man's inventive genius in the creation of machines and tools, add to the power of production until again it shall be increased one hundred fold, remains to be seen.

110. Creation of Wealth.—*In an economic sense, wealth includes all those useful articles which supply the wants of man. It matters not whether they may be always beneficial in their use or not. If they satisfy some known wants, though in the long run their effect may be deleterious, the articles assume the form of economic goods, and are called wealth.) A discrimination*

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should be made at once between the common significance of the term "wealth," meaning the relative amount of property which a man owns, and the economic use of the term "wealth." In the latter sense it means any form of economic goods or utilities, such as tools, articles of apparel, buildings, food, ornaments, or anything which satisfies the wants of man. The man who owns the shovel with which he labors is wealthy in the economic sense, to the amount of the shovel, just as the man who owns great machines and buildings and tools and railroads is wealthy to that extent.

The sum total of the wealth of a community is found by an estimate of the net private wealth of individuals plus the net public wealth of the nation. Sometimes those articles which are classified as personal or private wealth may be nothing more than an evidence of an indebtedness which must be accounted for in the inventory of the wealth of each and every person. Thus, a mortgage may be considered as the private wealth of an individual, but in the estimation of the private wealth of another individual, upon whose property the mortgage is made, it must be considered as an evidence of indebtedness. Thus the person who holds a government bond may be considered wealthy to that extent, but in the estimate of national wealth the same government bond must be entered as evidence of indebtedness.

The creation of wealth has increased rapidly within recent years, for its process is necessarily cumulative. Each year adds new processes of labor, new kinds of machinery, and new methods of development. Each year adds a large amount of capital engaged in produc-

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tive processes, which adds momentum to wealth producing and increases in geometrical ratio the power of wealth.)

III. Who are Producers? — It is a popular opinion that those persons who are transforming raw materials into the finished product and those who are engaged in the production of agricultural and mineral products through the aid of nature are all producers and all others non-producers. According to this notion, the capitalist, the merchant, the banker, the lawyer, the minister, are all classed in the great group of non-producers. The Physiocrats estimated the productivity of toil by the proportion of useful raw materials secured, as in farming, stock raising, mining, lumbering, and so forth, and they stigmatized all other occupations as barren because they were sustained by the surplus products of the land. Prior to them the mercantilists considered all industry as productive only in proportion as it tended to enlarge the nation's stock of money. Adam Smith and John Stuart Mill called all exertion, however useful it might be, which does not take the form of creating some useful material object or of fixing and realizing itself in such object, unproductive. It has been the tendency of English economists to follow Smith and Mill, while the French school of philosophers have held to the doctrine that all labor is productive that imparts economic modifications to material nature. Some of the German writers go even farther than this, and define every form of labor as productive which society is willing to pay for; as Roscher states it, "Every service which is rationally sought, and duly paid for, is productive.")

(All members of society who are performing a service.

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which has exchangeable value, or creating exchangeable goods, may be called producers. It is a popular error these days to suppose that farmers, for instance, are more a producing class than merchants, bankers, manufacturers, or transporters of goods. The farmer, it is true, produces food for the merchant, but the merchant exchanges clothes for the goods. If it were not for the merchant, the farmer would be obliged to leave his work and obtain his clothing from the clothier personally. Or, if it were not for the manufacturer, he would be obliged to do as he did in the olden time,—allow his wife to manufacture it for him. Also, the farmer would manufacture his own tools, and it would occupy much time which could be used more advantageously in the tilling of the soil. It is simply a question of the division of labor, in which the farmer says, "I will raise the wheat and exchange it for clothing, implements, furniture, flour, and for all the food that I need, which does not grow upon my land." Possibly the farmer has it within his power, if he chooses, to become independent to a greater extent than any other individual, for in a limited way he has within his grasp the source of all production. Nevertheless, without turning civilization back upon itself, he must remain dependent upon others, who coöperate with him in the process of production.

112. **Nature of Wealth.**  Wealth consists of the utilities in the form of economic goods which are formed by shaping, combining, or placing the various elements of nature. This wealth has sometimes been classified as material and immaterial. According to this classification, material wealth includes tangible goods that

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may be exchanged in the market; immaterial wealth refers to forces and conditions, such as superior skill, talent, or endowment, good will in business, and certain forms of credit. It appears that it is better to discriminate very carefully between wealth and the individual; that is, between wealth and the conditions of wealth. (If wealth consists in the well-being of man in his relation to material goods, it is necessary in political economy to understand that wealth is "objective to the user, material, useful, and exchangeable." These are the four essential characteristics of wealth. Wealth, too, is material, because those things which are immaterial cannot be well measured, and wealth can be. Only those things which are said to be useful and exchangeable can be said to be wealth, and by useful we mean things that are used, not necessarily things that are beneficial.) It is sometimes said that people sell the good will of a business, and therefore that the good will of a business should be considered material wealth. A careful analysis shows that you sell a business at a higher premium on account of its locality, and the excessive bonus paid is really in the nature of rent paid for a permanent monopoly. It is also asserted that when Patti gives one of her magnificent renditions, her song is exchangeable wealth. It would be better to regard Patti as an individual endowed by nature and developed by training to such an extent that she yields a superior service to mankind, which is regularly sought and duly paid for as a service, and not as wealth. The extra sum paid for this superior service is in the nature of rent of native and acquired talent and qualities.

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113. Various Methods of creating Wealth. (Material wealth is generally produced (1) by spontaneous products of nature, such as forests, mineral springs, and favorable localities; (2) by digging products from the mines; (3) by the growth of vegetable and animal products obtained by working in harmony with nature's forces; (4) by transporting things from place to place; (5) by changing the forms of things; and finally, (6) by exchanging them between different owners. Outside of these specific processes of obtaining material wealth, social organization and social improvement are conditions which enhance all of these necessary forms of wealth making.)

It is evident that the process of coloring by dyestuffs, or that of soap making, may be good illustrations of the chemical production of wealth. Everything pertaining to the making of clothes is an illustration of the mechanical processes of production. It is not difficult to see why the transportation of goods from place to place increases the value of wealth. As an example of this, the wheat and corn on the farm is of less value than after it is placed near the consumer, thousands of miles away. There is then no difficulty in understanding how it is that the exchange of goods increases wealth. Suppose a collector owns a good farm horse and a farmer a good carriage horse. The farm horse, not being a good roadster, is of little value to the collector, while the carriage horse is of little service at the plow and of little value to the farmer in any other way. By an even exchange of horses, each would be benefited by the operation. This disproves the old theory that if two men trade horses, one at least

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must be beaten by the operation. This principle has been further illustrated by the example of three persons, each tied to a stake, without communication: one having clothing and no food or fire, another having only food without clothing or fire, and the third having fire without clothing or food. As it is, each one will perish for the lack of the surplus goods which the others have. Could they get together and exchange their surplus products, all might live. This principle is vital in settling the questions of international exchange, trade, and tariffs.

114. Different Ways of creating Value.—The amount of wealth an article contains is termed its value, which represents the power an article has to exchange for other articles. There are various ways of creating this value, although it arises largely from the desirability of an article, and can always be traced to its subjective condition. The value of an article may be enhanced frequently on account of time. Thus, to keep apples from the autumn into the winter will increase their value, just as keeping ice from winter to summer will enhance its value. Also, the transporting of commodities from one place to another will increase their value. Thus, corn which is of little value in Kansas may be of greater value in Chicago, still greater in New York, and greater in England, simply because of transportation. But the greatest method of developing value is by changing the form of articles. The timber of the forest may be of little value until transformed into wagons or furniture, when its value may be increased one hundred fold. Cotton in its raw state has a certain value, but when changed into a fine garment

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through various processes, its value is greatly enhanced. The best illustrations of the various kinds of value may be seen in the transformation of iron ore into various articles. Thus, the ore at the mouth of the mine is possessed of a certain value, but when it is transported to the smelter, its value increases because of the change of place. When passed through the smelter, it is changed into pig iron, and its value is greater than before. If the pig iron is transported to steel works, its value is increased again, and increased still again when transformed into steel. If the same steel is developed into a sewing machine, a bicycle, or a watch spring, its value is enhanced very many times. The value of manufactured articles may be greatly increased by storage until the demand for them is increased.

We shall find, then, that in the production of wealth, to change the form or place of an article may increase its value, and that the value is represented always in the power of exchange. It is the relative term always accompanying the utility of an article which represents its want-satisfying power.) But this takes us back again to the proposition that all persons engaged in these various processes are producers, and all those who are aiding directly or indirectly the persons engaged in these specific processes may also be classified as producers.

115. Various Processes of Production. — If we inquire, however, into the essential elements of production, and try to estimate what factors are most largely engaged in the process, we shall find that land, or nature, labor, capital, and social organization are the great factors of production. Not that nature in itself is a producer of

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wealth without the process of labor or human exertion, but it occupies such an essential position in the process of production that it is considered a factor. These are all working in combination in the creation of wealth. While capital at first was not a primary factor, it has become essential to modern economic processes.

116. Essential Factors of Production. — The two essential factors of production are land (or nature) and labor. Without these there can be no artificial production of wealth. By the land we mean not only the earth in its fertility and wealth of vegetable and animal life, but the water power, and indeed all the permanent forces of nature which may be used and turned to man's service. It is only by the application of labor to these that wealth or economic goods are produced. In the beginning, labor takes the initiative by transforming the products of nature into useful articles, such as bows and arrows and implements, or into boats, canoes, and household utensils. Again, it creates clothing and houses,—all from the raw products of nature. These productions are called wealth, in the creation of which labor has been the constant factor from the beginning.

117. Conditions of Wealth Producing. — If man through labor has developed certain wealth, and this again is turned to aid in the production of other wealth or economic goods (such wealth, set apart to be used in the production of economic goods, is called capital). (In the modern economic life there is no production of any great extent possible without capital. Though labor logically preceded capital in production, in modern economic society capital usually takes the initiative in pro-

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duction. The process is as follows: first, labor produced certain portions of wealth; then this wealth was used along with labor to create other wealth. As wealth increased, capital became more prominent, and it employed more laborers in the obtaining of raw material. In some enterprises we find a large amount of capital and a small amount of labor necessary for production, while in others the process is the reverse, and we find a large amount of labor working with a small amount of capital. But in every instance, before production is entered upon, capital takes the initiative. It constructs the buildings, it furnishes the machinery and raw material, and gives labor an opportunity to earn its own wages. Thus labor is limited in its efforts by the amount of capital in use. The other non-essential condition of wealth producing is social organization. It is sometimes said that the state is a partner with the individual in the process of production. This is rather a strong and fanciful expression, although it must be conceded that without social organization modern business enterprises would be futile. The organization of society protects property and guarantees the rights of each individual to the products of wealth. More than this, when society at large deepens a harbor or widens a river, builds a canal or railroad, or furnishes means for the better development of agriculture, manufactures, exchange, trade, or commerce in any way, it is performing a great service in the advancement of production. Therefore modern productive enterprises are not possible without social organization, and the effect of social organization is to advance them at a rapid rate.)

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118. Means of increasing Production. One of the best methods of increasing production is through superior business management, and this has developed a distinct class of people, and indeed a distinct vocation, in production. It might be well to suggest the ordinary fifth factor in production as managing ability, for indeed, without this, modern business enterprises could not be carried on. The *entrepreneur* or business manager furnishes the brain power that keeps industry intact. He assumes the risk and responsibility of business, undertakes business enterprises, paying for capital, labor, and land as he has need. But while he has the responsibility of loss, he has the right of gain. Outside of a sound and industrious body of laborers, other things being equal, no other factor is of greater importance than the managing ability of the business men who undertake the great enterprises of industrial life.

There are other means of enhancing production, by having a better quality of labor and better relations between those furnishing the capital, the labor, or land, and the managing ability. Harmonious activity of all factors enhances production. Also, it may be stated that certain things which have arisen out of the necessity of economic progress from time to time represent some of the most wholesome conditions of production. Among these are the division of labor which enables men to produce more in the same time with less energy; the introduction of so-called labor-saving machinery, which combines with man's service as the result of his inventive genius; and the credit system, which enables the rapid exchange of goods; rapid transportation facilities; the fertile soil and excellent cli-

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matic influences, — all of which tend to modify and intensify the processes of production.)

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CHAPTER XIII

LAND AS A BASIS OF PRODUCTION

119. Land, or Nature, the First Consideration. — Man derives directly or indirectly all his sustenance from the soil and from the elements of nature. From the soil he receives vegetable and animal products, and from the water he receives power to turn machinery and means of transportation. The winds furnish him means of propelling machinery and mills, and carrying on commerce. The forests yield him timber; the mines yield him coal, salt, iron, precious metals, and many other products. The sunshine pours a flood of light and a volume of heat upon the earth, and quickens everything with life. It is from nature that man receives the conditions that allow life and the means which perpetuate it. It is through labor, in the mastery of these forms, forces, and elements of nature, that man supports life and advances his material welfare.

120. Bountifulness of Nature. — Nature is everywhere bountiful so long as labor forces her to yield her treasures. Economic writers have spoken of the niggardliness of nature, and how through excessive toil only could man receive his support. They have pictured all of the difficulties of economic life as appearing directly on account of nature's method of holding her bounties from man. Other writers have tried to show that nature is bountiful, and that all wealth is lavished with a free hand.

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The bountifulness of nature varies in many ways on account of different climate and soil. In one territory the soil is fertile, and with a small amount of cultivation responds readily to the labor of man; in another place the soil is poor, and with his utmost attention it yields but a meager crop. In the tropical climates, food grows already prepared, while in the colder climates the soil must be thoroughly tilled to yield a crop. Within the tropics very little clothing or shelter is needed for protection, in the temperate climate substantial houses and abundant clothing are necessary, while in the regions of extreme cold, man's whole time is occupied in obtaining sufficient animal food to keep him alive, and clothing to preserve him from the rigors of the climate. Standing alone, nature appears hard, cruel, and niggardly, but with labor applied she is made to yield a rich store of treasure. By labor, food is accumulated in abundance, clothing comes without stint, and houses and palaces arise for the protection of man. By labor, the refinements of art and education are made possible. It is true that at times nature appears fickle, for drought may spoil the crops, storms may devastate them, buildings may be destroyed by the ravages of fire and wind, and men may perish through starvation or the fatal pestilence. Yet it may be stated that, upon the whole, nature yields her bounties to man in proportion to well-directed labor.

121. Offices of Land. Land is essential, directly or indirectly, to all economic processes. Primarily, it is the great factor in production. It gives us standing room, without which nothing can be accomplished; for location, or position, is essential to life. In a scientific way the prin-

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ciple of location has a vast deal to do with economic life and economic theory. Again, by fertility it yields vegetable products for man and beast for the purpose of sustaining life and for use in the arts and industries, and finally from underneath the surface it yields the rich mineral products, —salt, iron, tin, copper, and zinc,—so much used in the economic arts, and gold and silver, desired for their services as money and in the ornamental arts. With these three uses of land man spends the greater part of his life in making a combination of forces or materials in the creation of forms of wealth.)

122. Civilization and the Land Question.—In the economy of human existence the influence of a fertile soil cannot be overestimated. The ancient civilization of Babylon, the arts and industries of Egypt, the philosophy and learning of Greece, depended upon a fertile soil. So great has been the influence of the land question among the nations of the world that if one were to write the history of land tenure he would have formed, in general, a correct estimate of the primary cause of the rise and development of national life. In the United States the effect of a large, fertile agricultural area is frequently overlooked by economic philosophers. Its broad valleys and fertile soil brought immigrants from the Old World to seek homes in the new land; its abundant mineral resources found in the heart of the mountains brought miners from the Old World to dig and delve for treasures here and develop a great population. It is the immense yield of these agricultural and mineral products that supplies the millions who run the factories, the looms, and the shops of the home country, and furnishes the surplus to feed the nations of the Old

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World, for which we receive an ample return in a variety of imported products.

123. Population and Land. — With the growth of population, the supply of labor is constantly increased, and it is limited by the amount of available food supply or subsistence. Fearing that the growth of population might gradually outrun the means of subsistence, an English economist named Malthus advanced a theory of population as follows: he held that population tended to increase in a geometrical progression, while the food supply under most favorable circumstances could not be made to increase more rapidly than in arithmetical progression. Hence, if there was no check to the natural increase of population, there would soon be more people than the land could support, and thousands would die of starvation. But there are sufficient checks in the growth of population to allay all fears on the subject. The first group are called the positive checks, by which population is kept down by means of accident, war, pestilence, plagues, intemperance, vice, and crime. Thousands thus perish from the face of the earth every year. The preventive checks are those of character and prudence, by means of which, as population becomes denser, marriages are postponed and the number of births lessened. Also, through self-control, families become smaller each succeeding year, and a check occurs to increasing density of population. The result is, that population practically does not increase in a geometrical ratio. Again, through modern invention and skill, land is made to yield a larger return for the support of life. Thus, by intensive agriculture, an acre of land will yield a larger support of life than ever before. For example, an acre of

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land in England yields a larger crop than it did a hundred years ago. By the modern art of cooking and preparing food, a given quantity of food has nearly doubled its power to support life. So that there has always been land enough, and, so far as we can see, for hundreds of years to come there will be sufficient land to support the population. Some of the instances of the rapid increase of population would seem, however, to be subject for thoughtfulness, at least. If population should increase in the United States in the future as it has done in the past, it is only a matter of time when there will not be sufficient standing room for the people. If our population continues to double every twenty-five years as it has done in the past, in 1925 we shall have 150,000,000 people; in 1950, 300,000,000 people; in the year 2000 we should have 1,020,000,000 people; and it would not be long before we should have in the United States more than the entire population of the globe at the present time. But the checks have already set in, both as to immigration and to birth, and such a calamity is not likely to occur. Mr. Marshall points out that if there are only two people on the face of the earth, and that if population doubles once in fifty years, at the expiration of 3000 years the whole surface of the earth, land and sea, would be covered with people 300 deep. The significance of these subjects is seen when the relation of land to population is considered, for the development of wealth is changed to a great extent by a rapid increase.

124. Laws of Income from Agriculture.—Industries are divided for convenience into those of increasing returns, decreasing returns, and equal returns. By this is meant, in the first instance, that if a certain amount of labor and

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capital yields a certain income, double the amount of capital will yield more than double the income; and in the second case, that if a certain amount of labor and capital yields a certain income, double the amount of capital and labor will yield less than double the income. In the third case, it is assumed that income will be increased in proportion to the amount of increase of labor and capital. Agriculture is generally considered an industry of decreasing returns. But it is necessary to consider specifically what is meant by this assertion. Usually, when this statement is made, it is understood to apply to a limited portion of land. Thus, if a farm of a thousand acres is considered, a certain number of laborers with sufficient capital applied to work the farm will give a certain income. If double the number of laborers crowd into this same area, with a proportional increase of capital, and the limit of production is not reached, they may greatly increase the product. Hence, increased amounts of labor and capital may be continually applied to this tract of land with a gradual increase in the returns or product; but this will be entirely disproportionate to the labor and capital expended. It may be more clearly illustrated in this way: to plow the land once will cause it to yield a certain crop; to plow it a second time will certainly increase the crop, but will not double the product; to plow it a third time will probably increase the product slightly, so that there is not proportionate return to the amount of capital and labor invested. Yet, when we consider agriculture as a whole, it will be found, if a long period be considered, that it is an industry of increasing returns. The invention of new machinery, new methods and appliances, and the increased utility of

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food, as above stated, yield a larger return in proportion to the number of persons engaged each succeeding year. In the consideration of this principle, all accidents of drought and years of agricultural depression must be excluded as abnormal.

In the case of manufactures, however, which are generally classified as industries of proportionate returns, it will be found that they increase their returns from year to year, in proportion to the number of persons engaged, more rapidly than does agriculture. However, if taken in a limited sense in a particular field, owing to competition, it will be found that manufactures decrease in returns the same as agriculture in a limited field. Where special monopolies exist, such as railroads, telegraph lines, and water power, the industries are usually those of increasing returns, as they yield an income in a proportion greater than the increased application of capital and labor.

125. Industries of Limited Returns. — In agriculture, when a given territory is considered, the law should be given as one of limited returns. That is, in the cultivation of a given tract of land a point is soon reached at which no additional application of labor or capital will cause the soil to yield any increased product. In many of the industries outside of agriculture the same principle of limited returns is to be observed in a lesser degree. The law of competition, which tends to reduce the market price to the cost of production, indicates the limitations of incomes.

126. Extension of Territory. — The opening up of new lands to modern civilization presents the relation of land to income in its clearest light. When Columbus first landed in America, a few thousand Indians were roaming

over a vast territory. They felt that there was not sufficient room for them to obtain a living, so they fought with each other for territory. To-day ninety million people occupy the same territory within the present boundary of the United States, and still, with the exception of a few congested districts, there is abundance of room. When the barbarians swept down over Europe and invaded the Roman empire, it was for the purpose of finding a larger area of land. Although few in number, their mode of living made the country insufficient for their needs, and made them discontented with their lot. Thus, rather than seek different methods of intensive agriculture or larger use of the land, they simply sought new lands, hoping to retain their old mode of life. Had they changed their civilization by introducing intensive agriculture, the utility of land would have been so greatly increased as to have supported a larger population without the necessity of migration.

127. Land Area. — Within recent years large amounts of fertile lands have been brought into use in the United States, which have yielded a large increase in the returns of the quantity of the products. As the demand for every agricultural product shows a diminishing scale of utility, and as the value of the whole product is determined by the marginal utility represented by the last unsatisfied want, it appears that if the scale of demand remains constant, there will be a diminished value of the total product; and this means that a point will be inevitably reached where receipts will fall below costs, even though costs themselves are also diminishing. We have had ample illustration of this from Western farming in the years from 1889-1896. For the

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cost of agriculture has been decreasing all the time, while the value of the product has decreased more rapidly than the cost; hence the price of a commodity in the market has frequently been reduced below the cost of production. Thus a relatively decreasing number of agriculturists have provided food for themselves, for the whole nation at large, as well as for foreign markets. If we refer to quantity, it appears that agriculture, taken as a whole, considered in the light of modern industrial methods, through a period of a century, is yielding more to-day in proportion to the capital expended upon it than ever before. It is estimated that in England during the last six hundred years the product per acre of staple crops has increased tenfold. But this, strictly speaking, must refer to the quantity of the product rather than to its value.

128. Transportation and Agriculture.—One of the greatest effects to be considered in relation to the productivity of the soil is that of transportation. Cheap transportation has a tendency to enlarge the agricultural areas and bring distant fertile lands into the market. For this reason the people have abandoned the farms of the East and have taken up lands in the fertile valleys of the West, distant from markets; yet the fertility of the soil is so great that the yield is sufficient to pay the transportation to market and leave an income greater than that of the inferior lands of the East, situated close to the markets. Indeed, the influence of the fertile lands of the Mississippi Valley has caused the abandonment not only of the poorer lands of New England, but even those of Scotland and England and other regions of the Old World, which have been forsaken for the fertile lands of the New World. Everywhere

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we shall observe the shifting of the population, rushing toward new and fertile lands, or receding as they are deceived by the process. This change has a vast deal to do with the doctrine of rent. Since 1897 agricultural products in the United States have been large and prices have gradually increased. The increased prices have been caused in part by excessive demands for food stuffs and in part by general increase of the amount of money in circulation,—in other words, an inflation of values.

129. Policy of the United States.—Nations have had different policies for the disposal of agricultural lands. The United States, by its laws of 1787, adopted a policy which had hitherto been unknown in the practices of nations in dealing with their public domain. This policy made it possible, for every one who desired, to obtain a hundred and sixty acres of land at a minimum price. This was deemed the wisest and best disposition of the land; although it did not always work well in practice, for the intention of the law has frequently been thwarted by individuals, who, by fair means or foul, have grasped large tracts of land, increasing their holdings in some instances to territories equal to principalities. The methods of disposal of land to settlers shifted from time to time with the desire to make it easy for them to take up land. However, in this connection, it may be stated that from 1870 to 1880 the average size of farms gradually diminished, and from 1880 to 1890 there was only a slight increase in the average. The average size of farms has continued to diminish to the present time, 1907. On the one hand, large farms were being divided into smaller tracts; and on the other, small holdings were absorbed by the larger.

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Thus, while a large number of vast holdings have been created, outside of these the average size of the farm is diminishing. As to the advantages of large or small holdings, Mr. Walker asserts that variety of farms is best for the benefit of agriculture. He holds that it is a good plan to have some great farms upon which the most improved machinery shall be used and the most modern scientific processes of agriculture practiced, in order to furnish a stimulus to improved methods. He further asserts that the medium-sized holdings, which give character to our great farming communities and enable men of moderate means to engage in the agricultural business, are beneficial to a great republic in which the people are endowed with the right of self-government. He further demonstrates that small holdings should be available, so that those who desire to quit the ranks of the wage-earning class may own a small parcel of land, and thus have their own homes and carry on their own business independently. This variety of landholding corresponds to the variety of life which is necessary to the stability and prosperity of a government by the people.

130. Monopoly in Land. —Many fear that the absorption of small holdings into great baronial estates will continue until a monopoly of land shall obtain, and landlordism shall prevail in the United States as in the Old World. In England and Scotland the land to-day is owned by a very few people, owing, in part, to the laws of primogeniture and entail. France, on the contrary, through the influence of an ancient law, insists that the estates must be divided among the heirs, and the practice of very small holdings has obtained there. According to the census of

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1890, 65 per cent of all the farms in the United States were owned by the occupants. Tenant farming has increased since 1890. This would show that landlordism, or the rental system, is gradually increasing in the United States. However, the farms are still small and the tendency to subdivision is great. What the future will bring forth is difficult to see. Repeated periods of agricultural depression may lead to the union of agricultural interests and the management of farming on a large scale, after the plan of a great department store or a modern "trust." When a person obtains a tract of land which is peculiarly desirable, to a certain extent he obtains a monopoly over that particular piece of property. But so long as there are other tracts more or less desirable, this monopoly can never be perfect; and so long as he must compete in the market for the sale of agricultural products, it is impossible for him to fix a monopoly price on his goods. The general tendency at present is to subdivide large estates. Considered as a whole, then, land is not a monopoly, unless it can all be owned and managed by a given individual or combination of individuals. Nevertheless, owing to the fact of the difference in fertility of soil and desirability of location, a monopoly of land arises in the form of rent, independent, to a certain extent, of the fact that the individual producer cannot fix a monopoly price and therefore obtain monopoly profits from his agricultural produce.

131. Agricultural Area in the United States. — Notwithstanding the fact that the city population has increased to an enormous extent, the agricultural area in the United States has increased more rapidly in proportion. In 1790 there was about 3 per cent of the total population in cities; in

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1900 there was about 33.1 per cent. The agricultural area has increased rapidly on account of the opening up of extensive lands. In 1900 the acreage of farm lands in the United States was 814,201,546, of which 414,713,191 acres were improved, and 426,541,833 were unimproved. The total value of farm property in 1900 was \$20,541,001,838. Besides the farm lands there were about 400,000,000 acres desert and government land, 70,000,000 acres coal lands, 80,000,000 acres timber land, and probably about 100,000,000 square miles unsettled.

132. Variety of Agricultural Products. — The United States has a wide variety of products, on account of its temperate and semitropical territory. In this wide extent, from the cereals of the North to the tropical products of the South, we find a great variety of fruits and grains.

As demand for variety of foods has increased, there has been a marked tendency to develop diversity in agriculture. Instead of sections devoting themselves entirely to wheat, to corn, or to fruits, there is a tendency to raise all of these to meet the irregular demands for products. Nevertheless, corn predominates in such states as Nebraska, Kansas, Iowa, and Illinois, while wheat predominates in Minnesota, Ohio, and the Dakotas. In many sections of California, where formerly wheat was almost the only crop, now fruit predominates, with a variety of other productions. The farmer is slowly learning that, because of the uncertainty of climate and the variation in demand on account of the irregular foreign production, he should vary his crops, so far as the soil and climate will permit, to insure a successful return on part of the land, if not on all. This

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has the additional advantage of utilizing the varieties of soil that exist even on the same farm, while the alternation of crops on the same soil is necessary in many instances to preserve the land from exhaustion. (In considering economic conditions, scientific agriculture has done much to increase the productive yield of land.)

Stock raising has continued in general throughout the United States. While an enormous stock production is still found on the grazing lands of the West, a still larger value of stock production is found on the smaller farms and special stock farms. When each farmer has a few pigs, sheep, cattle, horses, and considerable poultry, for the market, the returns from these sources in the aggregate are large. Stock raising has become one of the most productive and certain occupations of the farm.

133. Economic Effect of Machinery. —The process of farming has been almost entirely transformed by the introduction of devices and machines for the cultivation of the soil. The small farms of the Atlantic seaboard were rough, and in the early period full of stones, sticks, and stumps of trees. It was necessary to conduct farming by hand, or with small tools or machines, but the opening of the wide expanse of prairie land of the Mississippi Valley enabled farmers to introduce machinery for plowing, sowing, and harvesting, that are marvels to one not accustomed to their use. The economic effect is to lessen the cost of production. That is, one man can now accomplish as much with machinery as twenty men could formerly without. The whole population of the United States, with the old-fashioned machinery, could not produce what is now produced by a third of the population with modern ma-

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chinery. One economic effect of this introduction of machinery is that a smaller population is being used in the production of raw material in proportion to that employed in making the finished product. Hence a proportionately smaller return to the aggregate of farm labor than to that of manufacturing labor.

(While the decrease in the cost of production is evident, an enormous loss has been suffered on account of the rapid changes of machinery. As in manufacturing, the farmer who succeeds must keep up with the latest improvements, or the cost of production will be greater than the price of his product in the market. Therefore the whole farming country is strewn with out-of-date machinery, which must of necessity be a great economic loss.)

Again, the lack of economy of consumption has also created a great loss. The old-fashioned farmer might lose a spade, or a hoe, or a plow, by carelessness and exposure to the weather, and the loss would not be considerable. But sun and storm and wind will destroy the modern complicated farm machinery, which represents an outlay of hundreds of dollars, more readily than it would destroy the old-fashioned instruments. Therefore, to the farmer it is of prime importance that he economize the use of his machinery, if he wishes a margin in farming.

(We may almost say that the agriculturist is a manufacturer of products, the same as any other manufacturer. It is true, he has the land upon which to labor, and so does every other producer, to a certain extent. He receives his assistance from nature in the fertility of the soil, though the miller may receive his from the water power, and the manufacturer from mere occupation of the land. Hence, success-

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ful farming lies more and more in understanding the nature and preservation of soils and the adaptability of crops to them, a study of the best machinery, its care and use, and a careful study of the markets, to know what to produce and when to market it at a given price.)

134. Corporate Farming.—Scientific methods have been used on very many large farms, and while small farming has usually been more profitable, because more largely introduced, it still remains true that a large farm, properly managed, can produce more cheaply than a series of small farms. For each of the small farms must have its own set of machinery, its buildings, its special management, etc. Here, as elsewhere in all industry, combination, if there is sufficient brain power exercised in organization, will enable a cheaper production. Just as the department store may sell goods at a lower rate, and make a profit, than smaller stores in competition, or as a trust or combine may furnish manufactured articles more cheaply than a number of factories in competition, so a large farm under corporate management, where the territory would permit, might yield a larger return. But usually it does not, because of the lack of care in tilling every foot of the soil well and making it yield its utmost; while, on the other hand, such care is frequently bestowed upon the small farms.

The chief question in all of these industries is economy of consumption; or, in plain language, the lessening of expenses of handling the larger amount of the same grade of goods, enabling the employment of large machinery, which lessens the cost of production, and the advantage of transportation. On the other hand, intensive agriculture lessens the relative cost of tillage because of smaller acreage.

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One of the best forms of intensive agriculture in modern or ancient times is that of irrigation. In the valleys of the Euphrates and the Nile, in India and Spain, this method furnished in ancient times a food supply for many millions beyond the valleys in which the crops were raised; and especially in modern times in the western part of the United States, in the so-called arid region, irrigation has been carried on with great success. Irrigation contributes to the density of population, and therefore develops a better system of industrial coöperation, which yields a higher return of economic product for the labor employed.

Irrigation will not only allow the use of lands that could not otherwise be called into service, but by proper use of lands of sufficient rainfall they may be made to yield a larger return for the labor and capital expended. It has been demonstrated that agriculture is an industry of diminishing returns. The whole trouble with it as an industry is, there is a limit to the amount which an acre will yield. You may double the capital and double the labor, but it is quite unusual to double the return. Therefore, the importance of irrigation is to increase this yield beyond the ordinary return, with comparatively little labor. Thus it is that farm lands are made to yield a larger return each succeeding year, although it may be a larger return in quantity and not in exchange value. It is this intensive agriculture which prevents in a measure the population from overtaking the food supply. Malthus demonstrated that unless there were positive and preventive checks on the population, which increases in a geometrical ratio, it would in time outrun the food supply, which increases in an arithmetical ratio. Intensive agriculture enables one

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acre to yield a much larger food supply than it otherwise would. It is in line with scientific fertilization, which forces nature to yield her bounties more freely. A cheap food supply is beneficial to the human race and to all forms of progress. By a cheap food supply is meant the largest possible return of the land for the least possible effort, so that, though the farmer may receive lower prices for his food, he is ultimately benefited by being able to purchase manufactured articles at a lower price, for cheaper goods make cheaper manufactured articles.

One of the important effects of a cheap food supply in the Old World was dense population. Owing to the cheapness of food, the population multiplied rapidly, and in the imperfect form of government this cheap food developed despotism. A few individuals could, under these circumstances, rule the masses. But under enlightened government there need be no fear of a race of serfs. All densely populated districts are in danger of the oppression of bad government, although the possibility is for the best government. In a country where the people are jealous of their liberties there can be no danger of the development of despotism on account of thickly populated communities. Indeed, the permanency of agriculture tends to develop permanent social and political relations. And one of the chief economic as well as social blessings is that the yield shall be permanent. A farmer practicing irrigation knows about what his income will be each year. That is, he rises above the uncertainty of drought and the fickleness of climate in general.

135. What will be the Effect of Irrigation on Prices? —
In general, prices are regulated according to the law of sup-

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ply and demand, or, more specifically, by the marginal cost of productivity; and if a large amount of agricultural produce is thrown upon the market, it will have a tendency to lower prices, until, through the development of other industries, it shall be absorbed. But a small amount of irrigable land in the United States could scarcely be the controlling element in the establishment of prices. The products of the irrigable lands would receive the same price, regardless of the cost of production, as those of other lands, where the cost of production is greater. The result would be that larger profits would come to the irrigated land, or else prices would fall. Should irrigation be carried on to such an extent that the farm produce should be increased sufficiently to cause a fall in prices, the poorer classes of farms would go out of use, while still the irrigated lands would continue to be cultivated at a profit. Whichever result might occur, the irrigated lands would profit at the expense of other territory, less favorably situated. However, as the immediate territory in which irrigation is carried on may absorb all the products, an irrigated district may not compete with districts of normal rainfall.

(A high state of industrial organization can only occur in relatively dense population, and the rapid accumulation of wealth is dependent upon a highly organized community. The separation of producers into natural classes, and their subdivision into specialized labor, represent one of the most potent means for the accumulation of wealth. A successful division of labor can only be had in a relatively dense and well-organized community. This is marked not only in the utilization of labor, but also of capital. Capital seeks its best use and highest remuneration in a

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company of diversified industries and interests represented in a highly organized industrial community.)

136. General Results of Irrigation. — Thus we shall find that irrigation may become a means of developing a permanent industrial life; of reducing uncertainty of agriculture to certainty; of removing restlessness and discontent. It will furnish a means of development of a higher industrial organization, including a division of labor, which will furnish a means for the rapid accumulation of wealth. It will insure better educational facilities and a higher educational standard. It will develop better social conditions. It will elevate the religious life and develop the religious nature. It will furnish an opportunity for a higher political development, which shall be conducive to good government and the administration of justice. Therefore, with better schools and churches, with better means of social enjoyment, with a more perfect and satisfactory government, with good roads for rapid communication, with the use of the telephone and electric light, with a better water supply and a more perfect sanitation, with a daily mail carrying the news to every farmhouse, all of which are dependent upon a relatively dense population, farm life will be made the most attractive and wholesome life of the land. And these conditions, brought about by irrigation, may be extended to the fertile districts receiving sufficient natural rainfall, until we shall find that farm life, so uncertain and unattractive in the past, shall become the most attractive of all occupations, on account of its freedom and its social and political conditions. Then let us hope that the young man will return from the college to the farm and help his fellow in building up the most

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free, enlightened, and attractive communities found anywhere in this broad land. It is dangerous to prophesy, but the writer will conjecture that within fifty years in the United States there will be a change in the attitude of young men of good ability. Instead of seeking the law and medicine, and commercial and educational positions, they will return to the farm, where they will find full scope for their educated abilities in the industrial, social, economic, and political life which it offers.

137. Forests and Fisheries. — As land considered as a factor in production includes all of nature, we find that one product of America has been greatly neglected. The enormous waste of the spontaneous growth of forests in the early agricultural history of the nation reached the extent of prodigality. The ax and the firebrand made way for the crops of corn and wheat. No attempt was made to save growing forests and leave a source of enormous wealth to succeeding generations. We have few timber laws in the United States for the protection and cultivation of forests, as they have in many states of the Old World. Some few laws have been made for encouraging the planting and care of forests, but they have had but little influence. There are, however, some public parks in the United States which are termed Indian and military reservations, having the protective care of the United States Government, and some care has been taken to protect some of these parks from devastation. But the sawmill has penetrated the great forests of the West and Northwest and taken out the best of the timber, and destroyed that which was young and growing. The waste of forests can scarcely be estimated.

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Twenty-five billion cubic feet of wood is consumed annually in the United States, which is more than the forests of the United States annually produce. That is, it is equivalent to the wood growth of five hundred million acres, which is far in excess of the forest acreage of the United States. It would be wise in the Federal Government to oversee the forests on lands yet unoccupied, and to preserve them. Foresters should be appointed to market the wood and care for the growing timber.

The United States has been more judicious in the establishment of fisheries for increasing the fish food supply of the United States. Nothing is more important than the stocking of our lakes and streams with fish to make up for the loss entailed by constant consumption. Every effort of the Government to increase the universal supply of food advances the means of civilization. It improves the economic conditions of the nation and is of vast importance in the shifting of economic conditions.

138. Land Tenure. — Whether the United States would have done better to adopt a different form of land tenure, by which the nation retained a large domain of forest and arable land which it could exploit by tillage or rental for the increase of the public revenue and the prevention of too rapid increase of agricultural area and the wanton destruction of forests, is not easy to determine. It was customary for the nations of the Old World to have such a domain. England, through the influence of economic writers, — among whom was Adam Smith, who pointed out the failure in the administration of these lands, — gradually abandoned the idea of national holdings.

In the Roman system the *ager publicus* was a source

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of great contention, distrust, and political corruption. The Spanish nation, in its colonization, had a method of setting apart a portion of the territory for the payment of the expenses of government.

The United States established a policy of small farms in the beginning. In the colonial period there was a tendency to adopt the European system, which descended from the feudal custom of having large tracts with small tenant farmers. But this system could not survive under the spirit of American institutions. As above stated, the law of 1787, which provided for the survey of public lands in the Northwest territory, favored the division of the land into small farms, allowing any person who desired a farm to purchase it at a minimum price of the Government. The National Government has received large amounts from the sale of these lands for the support of the public treasury.

In the case of the admission of new states, two townships of land were devoted to the foundation of a university, and two sections out of each township for the support of public schools. This, with little variation, has been the rule in the case of all states since 1803, when Ohio became a state. Again, in 1861, two townships of land were donated to every state in the Union for the founding of an agricultural and mechanical college. Other lands have been devoted to internal improvements.

The policy of the United States has been to sell to private individuals the great bulk of our agricultural land. These lands are nearly all taken, and succeeding generations cannot hope to greatly extend the agricultural area, but must be content with intensive cultivation of farming lands already in use, or must find occupation in other pursuits.

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This fact of the growth of population and the limitation of the extent of agricultural area, coupled with the fact that the present possessors of the soil are owners, and therefore new generations have no right or title to the land which their fathers found and occupied, except through inheritance or purchase, have led many enthusiasts to advocate land nationalization. They base their arguments upon the theory of the natural right of man to an equal share in the soil which God has given to the whole people and not to any particular class. They advocate land nationalization, or that all the land be in charge of the Government, and that individuals should hold or rent their lands of this landlord, who represents the whole people; that the rental paid should go into the treasury in lieu of taxes. While there seems to be a phase of justice in such argument, the whole plan appears to be impracticable. The United States, having adopted another policy in the disposition of our public lands, will find it no easy task to reverse the plan by an entirely opposite method. Whether it might have been better to adopt a plan of land nationalization in the beginning, is a disputed point. It might safely be said, however, that the Government could have been less prodigal with her lands, developed the agricultural area less rapidly, and yielded a larger net product of the industry of the nation in proportion to the expenditure.

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CHAPTER XIV

LABOR AS A FACTOR IN PRODUCTION

139. Service of Labor.—It is primarily only through the power of labor applied to land or to the forces of nature that finished products, called wealth, are created. Labor is human exertion directed toward the production of wealth. It may be either directly or indirectly occupied in the process of production. Labor is either physical or mental; it is the "aggregate of those mental and physical capabilities existing in the human being, which he exercises whenever he produces a use value of any description." The person who is creating, either directly or indirectly, a product which is exchangeable in the market, or who is rendering some service to be sought for and paid for, is a producer of wealth or economic goods.) According to Mr. Roscher, labor is usually employed first in the occupation and use of nature's products, such as natural fruits, fertile land, mines, and forests, as well as mineral springs and other products of nature; second, labor is employed in invention and discovery, for a great part of man's time is spent in devising new methods of operation, and in the discovery of new elements of nature as well as their effects upon economic life, and also in extending the territory and increasing the number of nature's products; third, labor is employed

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in creating raw materials by the manipulation of nature's forces, such as the raising of timber, grain, wool, flax, cotton, etc.; fourth, by changing raw materials into finished products, such as the manufacture of machinery from the products of the mine and the forest; fifth, distributing things already produced, giving them place value by bringing them near the consumer; sixth, exchanging wealth products, so as to satisfy wants and enhance the value of articles; seventh, securing the person of the individual, by laws, government, and police force, while he is engaged in all these processes; eighth, imparting instruction, either religious or secular; ninth, directing the labor of others, which is among the most important phases of economic production; and finally, making laws for the protection of the people and their general welfare. In these principal occupations labor finds its service, and from them receives its reward.

140. Extent of the Labor Force. — The progress of a community in wealth making, other things being equal, depends upon the extent of the labor force, for up to a certain point a community is productive according to the extent of the labor force. Labor force will be great as the population is large, if we consider a long period of time. By the extent of labor is meant the number of hours actually employed in rational service, as well as the quality of the labor. In some nations labor force is measured by the excess of births over deaths. In another way the restriction of emigration and the encouragement of immigration of able-bodied persons will have a tendency to increase the labor power. Also, labor force is estimated in proportion to the small number of idle and in-

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efficient persons in comparison to those who are self-supporting and able-bodied. Again, it may be further stated that for efficiency of labor force the number of males should to a certain extent exceed the number of females. In estimating the efficiency of labor in a community, persons between fifteen and seventy years of age represent the strongest labor force. Those under fifteen and over seventy are generally regarded as more or less dependent. In France, 68.06 per cent is numbered between these ages; in England, 61.02 per cent; in Germany, 62.06; while in the United States only 59.06 per cent are between the ages of fifteen and seventy, — showing the efficiency of the labor force in France in proportion to the population as compared with the United States and other countries. The relative efficiency of nations may gradually change. It appears also that the number of defectives, dependents, and delinquents of the United States is large in comparison with France and other countries. In the United States 469 out of every 100,000 belong to this class, while in France 405, Belgium 226, Sweden 407, Norway 532, Great Britain 452, Germany 410, Italy 343, of each 100,000, belong to this class. This is a statement of economic conditions rather than a sociological defect, as in the case of the United States the defectives are carefully enumerated and well cared for.

141. Quality of the Labor Force. — While much depends upon the extent and general character of the population for effective labor power, the quality of the labor has much to do with its efficiency. Thus, strong, temperate, industrious men yield a larger return in the

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production of wealth than weak, intemperate, and shiftless laborers. It is evident that a class of laborers enervated by living in a warm climate will not do as much work as those of a temperate climate, on account of the languor which possesses them. The spirit of the laborer is also to be considered, for a well-kept, well-fed, independent, and happy, or at least contented, laborer is of far greater economic value than a poorly fed, poorly clad, discontented individual. Good wholesome food and a sufficient amount of it are conditions necessary to the best quality of labor. Also, the native strength of laborers has much to do with their efficiency in production. The character and quality of work done depend upon the spirit and will power of the laborers, and these, in turn, depend largely upon the moral and intellectual characteristics. While labor is divided into intellectual and physical, even physical labor must have intelligent direction; therefore the intelligence of the laborer has much to do with his efficiency. Therefore, for the best service of labor, it is eminently proper that supervision should be had over sanitary conditions, the homes, the kind of food employed, and social condition of the laborers, in order that their highest service may be obtained.

142. Various Grades of Labor. — The lowest grade of labor that is employed is slave labor, for the slave has no interest in the amount or quality of the work done. He has no interest in the finished product and no interest in the care of tools or property; having no political or social status, he does not work with hopeful energy. In the ordinary wage system a higher grade of skill is possible than in slave labor, because the individual has politi-

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cal and civil rights guaranteed to him. He is his own master, and able to make his own contract. His pay, instead of being determined by the lowest animal wants, is determined by the kind and character of the work done. Nevertheless, in modern times we do not find him a contented and hopeful laborer, on account of the uncertainty of employment. And it is somewhat to his discredit that he has less interest in the quantity and quality of the work done and the care of materials and tools than he ought to have. While in one sense his interests are identical with those of his employer, he has not always worked in his employer's interest.

The piece wages system, or the piece price plan, is in some respects of a higher order than the wage system, for in this case the pay is determined by the actual amount accomplished, and the individual receives greater encouragement while the work lasts; having an interest in the amount done, he puts forth all of his energies, which unfortunately frequently sacrifices quality and character of service.

Men who are employed in profit sharing, or in coöperation, have the highest ideal system of labor. While they have the privileges of the highest grade of wage-earners, they also have a direct interest in the care of tools and material, and in the amount and quality of service rendered. They have also an interest in the surplus earnings of capital and labor over and above actual wages paid. This gives them a hopeful and cheerful disposition. Wherever coöperation can be successfully carried on, it has a tendency to enhance the efficiency of the labor power and to raise the standard of life, thus

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creating better social conditions. But it seems scarcely possible that this can be entered into under all circumstances.

143. Division of Labor. — The quantity of wealth produced is greatly increased by the division of labor. This increases its utility in every way, although not without certain economic defects. By the division of labor is meant, that each individual, instead of attempting to obtain directly or to create all of the goods which he needs for consumption, performs a small part of the creation of a single article and exchanges this service for the supply of all his other wants. By this method the time of apprenticeship is greatly shortened, and the laborer soon develops extraordinary dexterity or skill in performing a single service. There is also a great saving of time, for each individual is kept in one place and at one employment; for the same reason, it is a saving of mental and physical strength. Division of labor also furnishes an opportunity for the distribution of abilities; as men are endowed with different characteristics and capacities which fit them for different occupations, so the division of labor makes it possible to fit each one to his proper place. Each one seeking to perform a single service in the easiest possible manner has facilitated invention. It prevents waste and saves interest and insurance by direct service. It is the concentration of the attention of the laborer on a single process that enables him to devise methods of saving labor. The improvements in the steam engine, in taking the seeds out of cotton, in the equipment of shoe factories, cotton mills, and iron and machine shops, have come about in this way. The

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machine grows from a simple, clumsy device to a complex, perfectly acting instrument by the perfection of a single part at a time. Division of labor allows women and children and "half-men" to work, thus enabling them to contribute to their own support, economizing the labor force of a community.

But it is not without its evil effects; for in forcing the mind to perform only one service, it has a tendency to make the laborer narrow, to decrease his general intelligence, and to render him unacquainted with the relations of things. It also tends to a closer competition of labor, and for a time hinders the mobility of occupation; but this is gradually being broken down, because of the excessive division of labor and the use of machinery which renders it possible for a laborer to learn in a few days or a few weeks the processes of a single occupation. The chief danger of the excessive division of labor has been in the excessive inducements offered to children to work, long before they are ready for the ordeal. This has been prevented to a certain extent in modern times by restrictive laws.

144. Coöperation of Labor.—All laborers appear to be competing with one another in general, and especially within the different groups. The rate of wages is determined to a certain extent by the number of laborers demanding employment in comparison to the number sought, or, in other words, upon the law of supply and demand. Hence, when a vacancy occurs where ten laborers are needed, a hundred immediately appear, seeking the position. Yet in the creation of wealth all laborers are working unconsciously together in making

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goods more abundant, and consequently cheaper, and the means of life more satisfactory. Yet laborers, observing the competition in the market, have sought to coöperate with one another in obtaining a higher rate of wages and in the satisfaction of social and economic needs. In doing this they have rendered one another great service in keeping up the standard of life, and, by agitation and education, advancing the rate of wages.

145. Labor has thus continually increased its Productivity. — Introduction of the machine and modern processes of production have enhanced the power of labor to create economic goods. By the aid of machinery, labor can accomplish more now in an hour than formerly in a lifetime. It is true that this is dependent somewhat upon the aid of capital; but in some industries labor does the greater part of the work, while in others capital performs the greater service, and labor does little. One of the complaints of labor in modern times is, that it has not received a fair share of the product of industry caused by the increased production consequent upon the use of machinery, the skill of labor, and a higher standard of life.

146. Improved Condition of Labor. — It will be found, however, that the laborer's wages have increased gradually from decade to decade; and this is evident from the improved condition of labor. The homes are better; the improved intellectual and moral conditions of labor are evident everywhere. Better food, better clothing, and better home comforts represent the improvement of labor during the past fifty years. It must be remembered in considering these questions, that periods of depression in which thousands of laborers are thrown

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out of employment must be considered as abnormal conditions, and in the economic sense the average improvement of the laborer must be taken as the basis of measurement of his welfare.

To a large extent this has been due to the exertions of the laborer himself. Improve the condition of a laborer, and he will command a higher rate of wages; pay him a higher rate of wages, and he will have the means of improving himself. Thus is perpetuated a favorable condition of labor. But it is through labor organizations that more has been done to educate the people to consider favorably the demand for better wages. Possibly wages have been advanced through strikes and close organization; but chiefly through the development of temperance, the improvement of the general social condition, the increased intelligence of the laborer, making him a better laborer, improvement in wages has taken place. Labor organizations have sought to create a monopoly of labor to compete with a monopoly of capital. They have tried to shut out of a given field all laborers not belonging to their organization. Yet labor organizations have not been without their own defects, as they have failed to develop a broad and catholic spirit among laborers, and in spite of their education have failed to realize the best results of broad citizenship and intelligent humanity. They have developed a selfishness which has in many respects been detrimental to their best interests.

147. Protection of Labor. — The world is slowly learning that the labor force of a community is its best wealth, and that it needs protection. Those employers who

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look carefully to the interests of their laborers receive a large reward for their services. Laborers are receiving protection in very many ways. The laws guarantee them the right now to organize, to assemble peaceably, and to strike when their interests seem to demand it. There was a time when these privileges were not permitted.

A careful glance at the numerous labor laws which have been enacted in the leading nations and in the various commonwealths of the United States, which provide for sanitary conditions of buildings, for the protection of life and limb, for the guarantee of the wages of the laborer as a first lien on the product, for the security of the rights of contract, and many other matters, show conclusively how well laborers are protected by law. Gradually each year we find everywhere measures enacted for the protection of the laborer in mines and factories. The establishment of labor commissions in over thirty states of the Union, for the purpose of gathering statistics and information concerning the condition of labor, has had a vast deal to do with the amelioration of the condition of labor and the protection of the laborer. Through these statistics and the united efforts of laborers many laws have been enacted in their favor. Here, as elsewhere, in all remedial legislation, grievous errors have been committed, which can only be remedied by time and increased intelligence on the part of the laborers who make the demands and on the part of legislators and philanthropists who endeavor to advance their cause.

148. Eight-hour Law and its Effect on Production. — Strenuous efforts have been made by labor organizations to raise the rate of wages and to reduce the number of

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hours of labor. It may be stated as a fact, that the general well-being of society would be promoted if each individual would labor eight hours a day, provided that this labor could be faithful and continuous and that the remaining portion of time, not used in sleeping and eating, should be devoted to self-improvement and wholesome recreation. The rapidity of the production of wealth in the world has not always been conducive to the highest well-being of society, on account of the sudden changes that occur in economic life. While a large number of people labor excessive hours, others are falling short of this average to a considerable extent, but it is the service of labor rather than its amount that yields general social well-being.

The economic effect of suddenly changing from ten to eight hours would be diverse in different industries. In some instances, where the labor is severe, more would be accomplished in eight hours than in ten; while, on the other hand, where time and the use of machinery are chief elements, less would be accomplished in eight hours than in ten. Taking an average of industries, it will be found that less will be accomplished in a day of eight hours than in one of ten; while considered by the hour, more will be performed in a given hour in an eight-hour day than in a ten. In considering the change from a ten-hour to an eight-hour day, people seldom consider the effect on general production. If the same could be accomplished in eight hours as in ten, the question arises as to whether there would be an increased employment of the number of men; if the demands of production can be accomplished in eight hours as well as in ten, the

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shortening of the day would not, as the unionists hope, give room for an increased number of laborers. On the other hand, if less can be accomplished in eight hours than in ten, will not wages necessarily fall by the day though they may rise by the hour? The question involves many economic considerations, for it must consider the amount of capital seeking employment, and the increase or decrease of the number of laborers seeking employment, and the effect on wages; it must consider the amount of increase or diminution of the total product of industry, and the increase or decrease of the amount of land used in obtaining the product and the rent of the same; and finally, it must include the increase or decrease of the rate of profits which accrue to the managers of the business. It will be seen that the real economic effect is determined by its relation to all productive and distributive industries. Whereas a general benefit would be derived if such a change would take place, it is difficult for the laborer to realize such a benefit in the form of increased remuneration for his services. If such a change takes place it should occur gradually, so that different industries could be adjusted to meet the new conditions.

149. Restriction of Immigration. — The great attempt of labor unions to limit the number of laborers entering a given field, and thus create a monopoly of labor, has been a cause frequently urged for the restriction of immigration. As wages would depend upon the number of laborers seeking employment in comparison with the demand, if laborers should be kept out of a nation by means of a well-regulated law it certainly would have a tendency to raise wages. Efforts have been made on the

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part of the United States to keep out the low-grade labor of China, and, more recently, other countries of Europe. It appears that if labor is to be protected in our own nation and a higher standard of living is to be preserved here than that which obtains in the Old World, it is necessary to establish some restriction of this kind. However, as every group of able-bodied laborers in a community where there are resources to be developed and capital seeking investment pays its own wages and adds to the wealth of a community, the evils of competition are greatly exaggerated and the reasons for restriction of immigration overestimated. The only value of restriction is to protect a country while it is adjusting itself to new conditions. In every prosperous country there is a demand for cheap labor along with high-grade labor. Hence the admission of a limited number of laborers whose standard of life is not high may be a benefit to the country admitting them and to the laborers. One of the arguments for keeping up the standard of life and raising the wages of laborers, used by certain politicians, is to institute a high protective tariff which will develop the industries of the country, make a demand for labor, and thus increase wages. It is difficult to see how this can be effective except in a very general way. The question will be further discussed under Taxation.

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CHAPTER XV

THE POSITION OF CAPITAL IN PRODUCTION

150. **Nature of Capital.** — Capital is absolutely necessary in nearly all forms of modern production. Having its origin first in labor, it finally, in turn, supports labor in the process of production, and may even limit the amount of labor that may be employed in a given territory. In the building up of industries, labor logically preceded capital; but in the practice of modern production, capital takes the initiative. Thus, labor first produced wealth, and the part of wealth set aside for the purpose of creating more wealth was called capital. All wealth which is not used directly in consumption as such, without regard to the creation of other wealth, may be called capital. Capital is wealth set aside with the determination of use in the process of creating more wealth. But capital itself is consumed more or less rapidly, although in every process of production it reproduces itself. The whole body of capital is consumed rapidly, and reproduces itself rapidly; so that the existing capital of the world is of very recent origin. Capital is said to be immaterial; some persons classifying as immaterial capital good will in business, credit, superior skill, etc. But these could nearly all be referred to some other category rather than to capital. Although this is a question of dispute, it is better to classify all capital as material and objective.

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The forms of material capital, as given by Mr. Walker, are generally included in materials to work up, tools to work with, and subsistence. A more analytic classification gives the forms of material capital as follows: improvements upon land, as well as all buildings, streets, and roads; tools, instruments, and machines; useful domestic animals; materials for manufacture which reappear visibly in the product; food and clothing for the support of laborers; materials for manufacture which will not reappear in the product; stocks of goods for sale; money; means of transportation; and weapons for defense. It will be seen from this that the wealth used otherwise than in the form of capital is comparatively small. But the fundamental idea in capital is, that it shall either yield a revenue, produce more wealth, or provide for future income and future enjoyment. The whole tendency seems to be to make capital that form of wealth which is set aside for the satisfaction of future needs; while non-capital wealth is that which is used for immediate consumption, without regard to future use. Considered in general, this is the essential definition of capital. However, wealth may be lying idle in the bank, with the intended use of production, which would be classified as capital.

151. Saving and Abstinence. — Writers have frequently asserted that capital arises from saving and abstinence, and, whether intentionally so or not, have conveyed the idea that capital arises out of sacrifice or parsimony. But the real truth is, that capital is the surplus over and above the amount consumed, which is again turned into business in wealth production. The word “saving” is

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correct if properly understood. It is simply refraining from the use of wealth in one way, that it may be used in another. It is the intention always to use capital, but not to consume it without leaving its equivalent plus a marginal return in some form of wealth. There may be present self-denial for the sake of a larger future enjoyment, or the refusal to use wealth in one way that it may yield a larger amount of rational enjoyment in some other way. At any rate, economy of consumption has a tendency to enlarge the amount of capital.

152. Fixed Capital and Circulating Capital. — It has been convenient to classify the different forms of capital in regard to methods of consumption into fixed and circulating. The former includes all concrete forms of capital which are more or less permanently established. Circulating capital is that which is used in a single process of consumption, like coal, or raw material of any kind passing into the finished product. It must be understood that all concrete capital is consumed in the process of production, and that this classification is merely relative in regard to the time used in consumption. It is desirable, in well-ordered production, that circulating capital should be consumed rapidly and that fixed capital should last as long as possible. Thus, in the consumption of coal, wood, or any raw material, it is desirable that it should be consumed rapidly because this indicates rapid production; while it is desirable that machinery, buildings, railroads, and all forms of fixed capital should last as long as they are efficient.

153. Specialized and Free Capital. — Capital is again classified, in reference to investment, into specialized

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and free. It is said to be specialized when it is bound up in a given business from which it cannot be withdrawn without loss. Thus, if a man should have \$10,000 invested in a stock of boots and shoes, it would be impossible for him to withdraw this capital instantly and invest it in grain or flour without loss. He must wait the slow process of trade or sale. On the other hand, free capital is usually in the form of money or securities which are immediately transferable and are awaiting investment. It takes a large amount of free capital to run any established business. And the amount of business which may be carried on is to a certain extent limited by the amount of available free capital. All new business must be developed through the use of available or free capital, upon whose service the business prosperity of the community is largely dependent. Unless it be plentiful, new business cannot be established; and unless there be sufficient to run the old business, it will fail. Business communities have frequently suffered on account of the absorption of all free capital in given industries and a deficiency of the supply to carry on business. When large amounts of property pass into the form of fixed capital which fails to yield a return upon the investment, or when large amounts of capital are specialized in the form of stocks of goods or materials for which there is no immediate demand, business is in a bad condition, and there is danger of a commercial crisis, or trade depression.

154. Pure and Concrete Capital. — When the term "capital" is used, it generally has reference to what is known as pure capital, and not to the concrete forms. For

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example, a merchant, when he talks of his capital, generally estimates it as so many dollars, without reference to the concrete forms of his capital stock. A large proportion of his capital may be in the form of goods, such as bolts of calico and other forms of merchandise; but these may change from time to time, the same articles not remaining in the store, but being sold and replaced by others, — yet the capital may remain the same. In this rapid manner pure capital is said to transmigrate from one form to another. The largest proportion of capital is found in the concrete forms of economic goods or wealth, and the estimation of the value of these, in terms of money, represents capital.

155. Accumulation of Capital. — It is generally supposed that large masses of capital are handed down from generation to generation with no economic process except that of investment, but this idea is not correct; for, although capital is saved, it is saved to be consumed, and replaces itself rapidly. Some authors have discarded the idea of the accumulation of capital, and have used the term "growth of capital" as preferable because of its constant power of reproduction, holding that the increase of capital is largely analogous to the increase of population. The creation of capital depends largely upon the direction given to industry. Any one who has command over a certain amount of free capital has a direct or indirect control of a corresponding part of the productive powers of industry. There are various ways in which he may use this free capital. He may give employment to labor in the development of industry which will enable capital to reproduce itself and perform a service in other ways.

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The capital will then be replaced with a margin of increase which is called profits. He might use it for immediate gratification by extravagant expenditure in costly suppers, but he prefers the former, and the result is the growth of capital. The process of the growth of capital consists in the increase of the fund of wealth from which savings may be made, and the determination on the part of its owners to refrain from immediate consumption, and divert wealth into the form of productive industry. The former represents the direct method of the creation of wealth, the latter that of saving it for future gratification. The desire for accumulation has been present in economic life, and has increased with the diversity of occupation. It is inherent in the nature of man, and influences largely the will in its determination not to consume goods, but to preserve them for future use.

156. Momentum of Capital. — The services of capital in modern production have become so very great that its power actually increases with its own momentum. Many find fault with capitalists, as a class, because it appears that they are all working in combination against labor. In reality each one, like the laborer, is seeking to receive the largest return for services, either in present or future gratification. In present gratification he obtains this satisfaction by the lavish expenditure of wealth. He hopes to receive a larger future gratification by turning the wealth which he has in his possession into productive industry, and thus increasing his wealth, and consequently the means of future enjoyment. Where a large number of persons, each possessing wealth, enter a corporation and turn their

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attention to productive enterprises, each has an industrial power which is large in proportion to that possessed by the single wage-earner. This large number of men, moved by the same idea, the gratification of personal wants, make it appear that capitalists have all combined to carry out their own selfish aims. The momentum of capital in modern industry is great, and, moving forward with its own inertia, its cumulative power is evident. The power of capital, then, rests rather in its own inherent nature than in the combination of any group of men called capitalists. Others have uttered their objections to the modern system of capitalistic production, and, like the socialist, have advocated the shifting of the management of capital from a few hands into the hands of the state. But change as we may the management of capital, its power in production will not cease.

157. Economic Significance of Capital in Production. — Capital is not only essential in modern production, but frequently is a limit to productive industry. As it takes the initiative in constructing buildings and machinery and providing raw material, the amount of industry will be limited by the amount of available capital that may be thus used. It matters not what form of productive industry may be practiced, — whether it is individualistic, socialistic, communistic, or coöperative, — capital is the essential feature to be considered in the beginning of any modern enterprise. Even those persons who begin a coöperative industry in any enterprise of the smallest scale must have room to work, material to work upon, and tools to work with, before they can accomplish anything. It was maintained by John Stuart Mill and other economists that capi-

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tal was used for the payment of wages, and that only a certain number of men could be employed, determined by the amount of capital devoted to that purpose, called a wage-fund. But more recently it has been generally held that the laborer earns his own wages each hour, day, or week that he works, and that capital merely provides the means of employment. But as the limited means of employment show the limitation of laborers that may be employed, the effect is the same as if the theory of the wage-fund were a fact. It is impossible to estimate the place of capital in production as compared with labor, but in the modern system of production capital has become an absolute necessity along with labor.

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CHAPTER XVI

PRODUCTION INFLUENCED BY SOCIAL ORGANIZATION

158. **Private Organization.** — Under free competition each individual seeks for the largest possible return for labor or sacrifice expended, but in seeking this return each works under limited opportunities. Owing to the fact that there are several factors in production, — land, labor, and capital, — it is necessary that the various forces in production be organized by some one in order that business may be carried on. One man owns the capital, another the land, and another has the right and control of his own labor. If these three were to come together, business might be facilitated on a small scale. But as a rule this question of bringing land, capital, and labor into combined effort is settled by a group of people called managers of business, or sometimes captains of industry. A person who has the power to labor for wages may not have the ability to conduct business, and possibly not the opportunity. Owing to the fact that large amounts of capital, labor, and land are essential to most modern enterprises, it requires a large amount of business skill and ability to carry on such work successfully. But few men have the ability and skill to carry on a great business enterprise. These organizers of industry induce capitalists to loan their money, build machines, and construct factories and

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provide the raw material, hire laborers and manage the business, returning to capital interest, to land its rent, to labor its wages, and retaining for themselves the profit of management. Here, then, we have a distinct class of people representing business management, the fourth great factor in production. Too much importance cannot be attached to this factor in the modern business, for, after all, it is brain power or successful management which more than anything else makes a business profitable or unprofitable. And it is the application of this superior skill which moves the wheels of industry and causes wealth to accumulate.

159. Firm or Partnership. — In private organization there have arisen from time to time different voluntary combinations of men who have been induced to organize on account of economic conditions. The development of these organizations, though in themselves voluntary, may be said to be natural on account of their essential outcome of previous conditions. In early times the manufacturer lived in his own home and gathered about him apprentices and helpers, and when articles were made he sold them from his own shop. He conducted his business alone, with a very small amount of capital and a comparatively small amount of labor. But after the invention of steam and the rapid development of power manufacture, industrial enterprises became much larger, and men began to associate others with them in the business of manufacturing or trading, and the partnership developed as one of the voluntary associations of modern production.

160. The Corporation. — As industry became more complex, enterprises became more extended, and the

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establishment of industries which called for a still larger amount of capital became necessary. A larger number of individuals went into partnership in production, in the establishment of banks, insurance companies, the building of railroads, and the development of land and mining interests. As a large number of persons doing business together without the personal responsibility for all, they became a menace to trade and general business. In order that these institutions might be legally created and that the people might have protection, they were incorporated by the municipality or state. They were then in the form to sue and be sued, and they could be to a certain extent under the control of law and could be made responsible for indebtedness. It is not the place here to discuss the imperfections of franchises and of corporation laws, or to show how, through the carelessness of the governed and the faithlessness of the governing, these corporations frequently became unjust machines for arbitrarily oppressing those who were not so carefully organized. The corporation came into use as a voluntary organization of industry, became an essential of the mechanism of modern industrial life, and as such now performs an immense service in production and at the same time yields great power in the political as well as in the industrial world.

161. Trusts and Combinations. — As industry developed and power manufacture increased through the extended use of steam, electricity, and water transportation, the industrial enterprises of the world became greater. Competition, which had been to a large extent shifted from individuals to corporations, became a battle of giants in production and distribution. Corporation was contending

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with corporation. The result of extra competition in industries and the cheapened methods of production caused a fall in prices. Certain institutions could not make fair returns on investments of capital, and so they placed goods on the market below cost of production. This created such a distrust in business and such a depression of prices that there arose a method of agreeing upon a fixed price of goods in a given line. This method of arranging a price for all goods of a given trade is a method of combination, and is for the purpose of allowing the least productive business in any given line to pay at least the cost of production, and the more favorably located institutions to yield a surplus return. Sometimes combination has been made between manufacturers and transporters of goods for the purpose of arranging rates and controlling the market.

But the most important and interesting phase of this subject is the extension of organization, in which all industries in a certain line pass into a super-organization called a trust, but which in reality becomes a gigantic corporation with monopoly power. Generally, stock in the trust is issued in proportion to the amount each corporation puts in. So, having formed this trust, or corporation of corporations, the unprofitable enterprises are closed, and only a few of the more profitable are continued in business. If the business will warrant it, all of the different institutions are kept running. At any event, they are run or closed as will best suit the interests of the trust. Having assumed control of the entire manufacturing interests in a given line, the next step is to fix a monopoly price, in order to obtain monopoly profits which depend upon the market. The object to be gained is the largest net return for a given

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amount of sacrifice, labor, and capital. This is not easy to secure, for the law of supply and demand here enters the field as a determining power. This law assures us that if prices fall there will be an increased demand for goods, but not essentially in proportion to the fall. If prices rise there will be a falling-off in the demand for goods, but not essentially in proportion to the rise in the price. Expenses of management will increase in a certain proportion in respect to the amount of goods handled, and decrease as the number of articles handled decreases. The question to be answered then is: At what price may the largest net returns be secured? It is therefore not possible for a trust or monopoly to fix its price regardless of the demand, as it is limited in what it may charge for goods. Another limitation also on monopolies is found in the effect of prospective competition. If it be found that a trust has been making enormous profits in a given line, sufficient capital will be gotten together to compete with a trust, which, of course, makes the largest competitive units yet known. The threatened competition keeps prices within certain limits, which frequently brings them below monopoly profits. But more frequently the trusts themselves overestimate the market and fix the monopoly price above its normal rate, and thus injure their own business. It is possible for a trust or great monopoly to furnish goods to consumers at a less rate than they can be furnished under competition of a large number of establishments. If they would only consent to be reasonable and fair in their charges, so as to make only reasonable income, there would be no better way of furnishing goods to consumers, for the price would be regular, and cheaper than when

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furnished by competition of a large number of institutions. The chief danger of trusts is their monopoly power, which permits them to take undue advantage of the markets. They raise the prices of necessities suddenly, before the influence of prospective competition acts. It takes a long time to get business in motion even after it is planned, and the sudden raising of the price of sugar, flour, or coal for a month will yield an immense income to a corporation with such power. This may be done in such a manner as to be little less than robbery of consumers, who must pay the arbitrary price fixed by the monopoly.

162. Effect of Organized Labor on Production. — The organization of labor has a great influence on production, although the nature and extent of this influence is not easily defined. For while the organic action of labor may on the one hand keep a steadiness in the market, it frequently counteracts this result by creating a distrust in business, causing indirectly the discharge of many laborers who otherwise would continue to be employed. More especially is this result observed in the timidity of managers to enter new business. Upon the whole, it may be stated that, as labor organizations become more prominent and more steady in their organization and more reasonable in their demands, their effect is to make stability of wages and to a certain extent to increase the rate. The labor service is greatly improved in quality, which of itself tends to increase the amount and the value of the product of industry. Could laborers and managers agree upon a method of establishing wages, such as a sliding scale or contract for a certain period of time, so that the business managers would know what to depend on, much advantage would

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accrue to industry. The agreement to settle everything by a joint arbitrating committee has worked well in several industries where it has been tried. If manufacturers and employers in general could count upon the stability of wages and the absence of strikes and other interferences of industry, production would be more regular, and commodities could be placed on the market at a smaller cost.

163. Effect of Political Organization. — The strength and stability of government has much to do with the stability of values, for the greater the security of property and labor, the fewer fluctuations of taxation brought about through extravagance or excessive demands, the more steady will values become. Every form of social organization has its influence on values. The government has not the power to create values nor to destroy them directly, but it may so coöperate with individuals as to regulate production. It may also by consumption increase the demand for a commodity and thus advance its price, or by a certain law increase or decrease the demand for it, — thus influencing the market. The action of the government frequently materially affects markets. A good example of this is seen in the political uncertainty that occurs just before a presidential election in the United States: it influences business to such an extent as to cause stagnation in certain lines. The turmoils of some small nations frequently lead to a perpetual disturbance in business, rendering capital and all investments insecure.

164. Increased Productivity on Account of Organization. — Thorough economic and political organization will greatly enhance the productivity of wealth, while, on the contrary, poor organization leads to distrust and to ex-

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pensive and slow production. The influence of the firm, the corporation, and the trust on the rapidity of production is well known. The grouping of people in well-ordered homes, the creation of voluntary or involuntary groups wherein division of labor is practiced, enhances the power of production. By organized effort wealth is rapidly increased, because all of the forces of production are rendered highly efficient.

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PART III

DISTRIBUTION OF INCOME

CHAPTER XVII

PRINCIPLES OF DISTRIBUTION

165. Net Product.—~~C~~The net product of industry is that which remains after all expenses of production have been paid. By expenses of production is meant only the waste or use of capital, which must be replaced, and the income over and above this is called the net product. In considering a given manufacturing plant from the standpoint of the technology of wealth getting, the net income would be that remaining after all expenses of rent, interest, wages, and expenses of management have been paid. But it must be remembered that the net product considered here is the amount distributed among the different economic groups represented; namely, landlords, capitalists, wage-earners, and managers; or, in other words, into different shares, such as rent, interest, wages, and profits. The methods of distributing the net product are worthy of consideration. First, distribution of wealth in this connection has reference to ownership of property rather than exchange of place or location on the earth's surface. Into whose hands does the net product fall? In investi-

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gating the principles of distribution, it is well to assume their operation under laws of free competition. We are not concerned at present with the actual conditions of an industry instituted for the purpose of making money, but rather with the general laws arising from economic production without interference with concrete conditions. Indeed, all economic law that may be demonstrated to be final and exact must operate under the conditions of free competition. Every discussion of the abstract principles of political economy recognizes this fact. Interferences which may be caused by monopoly or by government are to be considered in a separate connection.

166. Nature of Distribution. — John Stuart Mill held that production is natural, and therefore its laws may be observed, but that distribution is artificial, consequently it is not possible to discover constant and certain laws. It is true that production is less interfered with by conscious human influences than distribution, the latter being disturbed in its natural course of free competition more readily than the former; but there is no reason for assuming that there are not natural processes in distribution as well as in production. The Socialists advance the idea that natural distribution, like natural production, is the only just method. The only difficulty in all this discussion is to understand what is meant by the term "natural." What the socialists consider natural distribution is finally settled when they discard the laissez-faire doctrine, or that of absolute freedom in competition, and insist that the state should regulate this just distribution, as it is the only body that has power to attend to it justly. Henry George states also that the "just distribution of wealth is mani-

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festly a natural distribution of wealth, and this is that which gives to him who makes it and secures to him who saves it." Here, again, is the question of the use of the term "natural." It is evident that it is determined by purely *a priori* argument.

It may be assumed that there are natural economic laws based upon the active conditions of economic society, but they do not assume a state of nature, for society is built up by a struggle against nature, or rather by the mastery of nature. In other words, the economic law of distribution does not in any way precede the construction of economic society, and what might be natural distribution under hand manufacture might be unnatural under power manufacture. Yet in the consideration of the main facts of distribution, — that is, into whose hands the net product will fall under a state of free competition, — and in determining upon what principles the net product of wealth passes into certain hands, we may appeal to general laws. Afterward we may consider the exceptions to these laws and inquire into their various interferences, for it is evident that these laws do not consider the necessities of man nor the justness of distribution. They only ask what happens, and why.

167. Divisions of Net Product. — The great problems of economic society have been stated as follows: first, how to create the largest aggregate of utilities, or of wealth; second, how justly to divide this amount; and third, how to make the product minister to the permanent rather than to the transient well-being of society. These problems go beyond the bare expression of economic law, and seek the ultimate of economic existence. With society putting

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forth its unconscious effort to create economic goods, and each group seeking to obtain the largest return for time and service in the form of wealth, it is found that the net product falls regularly into four categories: rent, interest, wages, and profits; to which is added sometimes, for the sake of convenience, a fifth category, called "anomalous" fortune, which is only a term to represent the unclassified. But how are we to determine the amount which will pass into each separate category? Is there a law which will determine this? It is easy to observe that the amount which goes to rent, interest, or wages, for instance, is quite a constant quantity. It is also conceded that the average profit from year to year remains about the same. But what determines the quantity which passes into each of the several categories? The surplus which obtains on account of excessive fertility or favorable location of land is called rent. Rent is easily determined as the difference between the return upon that land which will just pay expenses of cultivation and the return from more fertile land. If this principle is extended to other industries, monopoly or proprietorship of fixed material or conditions, the rent principle appears. Wages are held to be the reward of labor, distinct from the earnings of capital or any other agency. The laborer receives wages for his toil. The manager of business receives profits as his reward for ability to organize and superintend business. The capitalist receives interest on account of his ownership of capital, and on account of the increase of the net product due to the services of capital. The fifth category, which is sometimes used, that of anomalous fortune, would include all those material goods not included in the preceding categories.

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The above statements represent the factors of the four categories of distribution.

168. Undivided Net Product. — It sometimes happens that a small proprietor who manages his own business receives the entire product, — rent, wages, interest, and profits. As, for example, a small farmer who owns his farm receives rent on account of fertility and location, wages on account of his own labor, interest on account of the capital he has invested, and profits on account of his skill in managing his affairs. Yet in economic analysis all of these divisions are clearly discerned, for rent arises out of land whether a man works his own land or that of another.

169. Law of Equal Returns. — In determining these divisions of the net product there are certain laws which may be observed, although in practice, owing to certain interferences, they show nothing more than tendencies. Indeed, a large number of economic laws, when put to final test, show nothing more than general tendencies; yet these general tendencies are important for consideration. Let us suppose that we have free competition among all industrial people, and that we have likewise perfect mobility of capital and labor so that they will go wherever needed, and that there is sufficient land to be called into operation when it is needed. Add to these conditions one other; namely, that each knows what other business men are doing or about to do; then we shall find that the last increment of capital or labor or skill will receive the same remuneration as the preceding increment of each most recently employed in any way. That is, a dollar, or a day's labor, or a day's managing service, will yield in each

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case as much in one business as it would in another, and will be determined by the remuneration of services in the last investment. Now, this arises out of the fact that these various factors of production which are enumerated will seek the largest possible return of wealth for a given sacrifice. For it is easy to see that, under the conditions mentioned above, labor will tend to go where it will obtain the highest reward, and, if perfectly mobile, the equilibrium of demand and supply will be established and wages in the same employment will be the same the world over. The same is true for capital.) For if men understand that other businesses are more remunerative, and if capital moves freely, it will seek the highest rewards, but in its attempt to do this the equilibrium of supply and demand will again be established.

Now, it is well known that capital, labor, and managing ability are not perfectly mobile, and it is also well known that each man does not know what all other business men are doing or are about to do. But there is a constant tendency to realize this principle; that is, there is a tendency in interest on capital to become the same no matter where it is invested, for wages to reap a certain average rate, and for rent to become more constant from year to year. The interference of monopoly and government destroys the mobility of capital and labor, and thus modifies the action of the laws of distribution in relation to them. Yet, upon the whole, equal returns to last investments appear to be more and more constant.

170. Dynamic Law of Distribution. — It has already been stated that the divisions of the net product into wages, rent, profit, and interest, if taken at any given instant, will

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represent a more or less constant return to each, but if industrial processes are set in motion, the relations are liable to change from time to time. Thus, the amount of labor, land, or capital in the market at any given time varies, and hence yields a variable amount to wages, rent, and interest, respectively. Considering productive enterprise in motion, land, labor, capital, and managing ability will tend to be remunerative inversely in proportion to their increase; that is, the one that has the smallest relative quantity in the market reaps the greatest reward at the expense of others. In other words, if labor and capital remain the same in quantity, and a large amount of land be suddenly thrown upon the market, rent will have a tendency to be low while labor and capital are called into use, and will reap a relatively larger income in proportion to services. Or, if land and capital remain constant in quantity, and a large amount of labor be thrown suddenly upon the market, wages will tend to fall, and rent and capital increase in proportion. Thus, if capital is doubling itself in forty years and labor in twenty, land remaining constant, wages will be lowered and interest raised. It is in this way that a sudden increase in the laboring population tends to lower wages, or the taking up of a large area of agricultural land suddenly lowers rent.

Nevertheless, under normal conditions of industry, the law of supply and demand is brought into operation and the equilibrium of distribution appears. Thus, if a large amount of labor is thrown into the market, it seeks employment, and if capital is available, it employs labor. If land is available, it is also called into use, so that they stand relatively in the same position as before. This law mani-

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fests itself, then, largely in the irregularity of social development, which is soon overcome by the reestablishment of normal relations.

171. **How the Gross Product is Distributed.** — By gross product is meant the entire amount earned in a given industry, or, if considered in the concrete, of a given plant of said industry. It represents the entire earning capacity of an industry as evident from its annual output before expense of running has been deducted or economic distribution has taken place.

In considering a specific business, the gross profits are divided into: replacement, which means making good the loss of capital which has been invested in any given business; interest, which must be paid for the use of capital to the man who loans it; insurance, or a certain sum set apart, taken from gross profits, to cover past or future losses, because the revenue varies from year to year; the wages of superintendence or management which generally appear in the form of salary; and finally, the fifth element called pure profit. This accrues to the manager on account of superior wisdom in the management of business. This represents the analysis of a single business from the standpoint of a business operator.

It is clear from the foregoing that the amount of profits which each factor receives is not immediately dependent upon the proportional amount each corresponding factor in production supplies in the process of creating wealth, hence we must find some other determining cause. One school of economists has held that nature, labor, and capital are the three sources of value, and from each one there flows a stream of value coming from its respective source;

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that the amount and volume of this stream is dependent upon the power of land, labor, and capital in production.

DIAGRAM A.
PROPORTIONAL DIVISION.

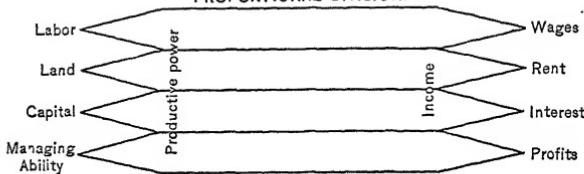


DIAGRAM B.
VALUE.

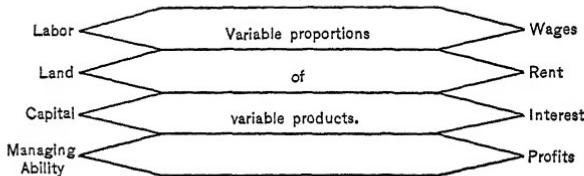
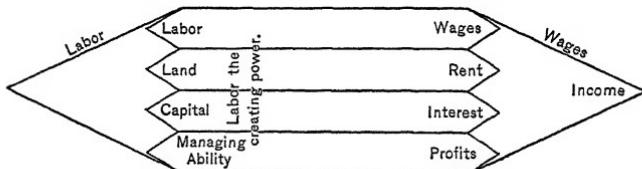


DIAGRAM C.



(See diagram A.) It is held that there are three distinct streams flowing from source to mouth, that just the proportional amount of value as has flowed from each source passes into the income of the persons who own the soil, the capital, or furnish the labor; that the force of the stream of value is dependent immediately upon the force of the stream of productive power; and that each source thus represents

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a distinct productive power, with a distinct quantity of economic goods, each having definite value. This, of course, makes distribution a question of production, which is scarcely true.

If we were to carry out the figure it might be said that the truth lies in the fact that the three separate streams of production spread out again into distinct branches in their value-creating power. (See diagram *B*.) That is, the stream comes under the influences of the causes which create value; namely, the demand for goods, which includes the ability and the willingness of men to take economic goods at a certain market value. The value-creating power in production depends upon the intensity of men's needs and the quantity of means which they have for supplying these wants. That is, the amount of income flowing into these three separate categories will depend, not upon the several amounts of powers of production, but what has been separated out from the three streams in the figure by the value-creating power of man; that is, we refer it again to the law of supply and demand and market valuation.

Another group of economists assume that labor is entitled to the entire product because it is the source of value, and that labor would receive this product if it were not for a band of robber landlords, capitalists, and managers who suddenly appear to divide the returns of labor among themselves. This argument cannot be maintained, because labor is not the only cause of value; nor would it be true that after rent and interest had been separated out, wages would take what was left, — for indeed there is no residual claimant, either in rent, interest, wages, or profits. (See diagram *C*.)

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If wages be considered, first, what is the wage-earner's share of this varying proportion? It will be determined by the value-creating power as estimated by the market valuation of goods, which is determined by the law of supply and demand in combination with capital and land. If there is no limit to the supply of laborers, while the total amount of wages received may be greater than the total amount of capital in any given production, the former will be out of proportion to the total number of laborers employed, and the laborers themselves competing with each other for this total amount may reduce wages, on account of the law of diminishing returns, down to the minimum of living. That is, the individual laborer must depend primarily upon the valuation placed upon the products of his labor in combination with other forces, and secondarily upon competition with his fellows for his share in the total product. Nevertheless, in normal conditions of business the rate of wages tends to remain somewhat constant, or to improve with improving business and decline with declining business. We can account for this in no other way than from the fact that the presence of a large number of able-bodied men seeking employment, other things being equal, will bring into operation a larger amount of available land and induce a larger amount of capital to seek investment, all of which will require a larger amount of managing ability. Therefore there is a tendency for not only the total amount of wages under normal conditions to remain about the same, but the rate of wages among laborers of the same grade to remain more or less constant. Especially is this true when we consider that of any staple commodity in the market, the market price,

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though not caused by the cost of production, has a tendency to approximate to this finally.¹

Suppose, now, that the entire product in a given business be one thousand, and that ten units of land yield eighty units of rent, ten units of capital yield one hundred sixty units of interest, ten units of organizing power yield one hundred sixty units of profits, and ten units of labor yield six hundred units of wages. It is evident that the average wages received by one unit of labor would be sixty. If the population under normal conditions should steadily increase until it was doubled, we might assume that the product would be doubled, and we should get two thousand instead of one thousand; that twenty units of land would yield one hundred sixty units of interest; twenty units of capital, three hundred twenty units of interest; twenty units of organizing power, three hundred twenty units of profits; while twenty units of labor would yield just double what they did before, or twelve hundred units of wages, the average wages of each normal unit remaining sixty, and so for each other factor in production. If, on the contrary, we would have a sudden influx of a lower grade of labor, the product would not be doubled under other similar conditions. Suppose, now, that the product amount to only eighteen hundred instead of two thousand. In this case, fifteen units of land would yield one hundred thirty-five units of rent; fifteen units of capital would yield two hundred seventy units of interest; fifteen units of organizing power, two hundred seventy units of profits. The total to wages then would be the difference between the sum of these and eighteen hundred, or eleven

¹ See Thompson, "Theory of Wages."

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hundred twenty-five. But the labor having been doubled, namely, twenty units, the yield here of wages is only fifty-six and one fourth to each unit of labor. While the entire amount of wages by the influx of cheap labor has been increased, the rate to each individual has been diminished. It might likewise be shown that land, capital, and organizing power receive a diminishing product per unit through the introduction of a large amount of unskilled labor.

This harmonizes the two apparently opposing theories respecting wages, and makes them complements of each other. (1) That wages of all laborers in similar employments are determined by what the laborer can produce who works on the margin of cultivation or the margin of utilization. Here the laborer receives as wages the total product, and if other laborers receive more than he, he would leave the margin to compete with them and the margin would rise. Hence the equalizing tendency of wages brings them all down to the marginal laborer who works upon the poorest opportunities.

(2) The other view asserts that wages are determined by the standard of life of the laborer. The general rate of wages in any country, class, or industry is the standard of living of the most expensive families furnishing a necessary part of the supply of labor in that country, class, or industry. The first is the objective law of wages, the second is the subjective.

Both of these laws are subservient to the law of supply and demand, and the value-creating power of the productive process. The larger the supply, the lower will be the marginal product compared with the labor producing it. Hence, whatever controls the supply of labor

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controls the marginal value of its product, which determines the general rate of wages.¹

It is held by some in this connection that the manager of business, the *entrepreneur*, is the residual claimant, and that the large products of industry are absorbed in profits. But it will be found under free competition that profits are governed as specifically by law as interest, rent, or wages. As related above, the gross profits of any business are made up of what we term the replacement of capital, the insurance, interest, wages of superintendence, and what we may call pure profits. Pure profits are the only kind which should be classified along with pure wages, economic rent, or economic interest. Mr. Walker attempted to show that the profits received by different employers in the same enterprise vary according to the law of rent, and that there are certain industries that, having paid interest, wages of superintendence, insurance, and replaced the principal, — the capital, — there was nothing left for the *entrepreneur*; and for this lowest class of industries there was a constant gradation to the highest, which paid a large return of net profits on account of superior position or management. That there are certain industries that pay no net profits, every one knows; that there are others in the same line that pay small net profits, is evident; while there are still others that pay a large return in profits. It is also evident that unless a manager of any business can pay the expenses of that business he will not continue in it, except it be through a short period of hard times in order to tide over business to better times, or to keep from losses. But

¹ See chapter on Wages.

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under free competition the total amount of profits going to the *entrepreneur* or manager in any given line of industrial operation will depend again upon the demand and supply, or the subjective valuation of the goods produced, by the consumers of those goods; and, secondarily, upon the competition of the number of *entrepreneurs* or managers seeking investment in any given line. But there are so many disturbing elements which modify profits that it has the appearance of being less steady than any other return in business. Thus, in case of a drought or a failure in business, wages, rent, or interest, is each steadier than profits.

172. Rights of Property. — The theory of the rights of property is frequently discussed by economists, and it has its place here in distribution, for it has a great influence in this part of economic life. Some economists have held that the right to hold property is based upon labor. According to their ideas, the man should be the owner of the things created by his own exertion. If this theory is put into practice, it leads to absolute confusion, for when a man possesses a house, a forest, or a farm, it may not have been his own labor that created any one of these; nor in the goods that fill a store do we find any evidence of the creative power of the owner. From a legal consideration the origin of the right of property is not discussed very fully. Lawyers have taken the right of property as a fact, and the rights of property are secured only through the power of the state. To define property by its attributes, accepting it as a fact, is the extent of the legal conception. Certain persons have advanced the theory of natural rights, holding that property is merely

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an extension of human personality over external nature. This is a very imperfect conception, for it leads to the assumption that all people are property owners. The occupation theory ascribed property rights to the one who first obtained possession and whose property was finally recognized by his associates. Doubtless this is the atomic theory of the origin of property, though it has been much extended. The individual and collective ownership of property in the early period points to the idea of occupation as the first recognized title. It is evident that there is some truth in each one of these theories, but that the real test is in the property rights as evidenced in the Roman law and the French civil code, and as such is recognized in all modern civil and common law.

Economic distribution is modified by the rights of property. Certain property is rapidly consumed, and the influence of ownership is very light; other property lasts a long time: indeed land itself lasts forever, which makes a vast difference in distribution. Other forms of wealth or property, such as government stocks or bonds, last as long as governments themselves. These highly perpetual classes of goods descend by will or inheritance from one person to another, and the distribution of wealth is thus very much affected. There are persons who are scarcely capable of earning a respectable living single-handed, yet they inherit fortune from a distant relative; the result is a distribution of wealth, and a net product of industry soon begins to flow through rent or interest. To avoid this principle of distribution by means of inheritance, the socialist sought to dispose entirely of inheritance; that is, to abolish it. People who complain bitterly

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about inequalities of economic distribution are opposed to inheritance, for it tends to perpetuate and aggravate these inequalities.

The exercise of the rights of property may be by a private person or individual, or, through the operation of the law, by a group of individuals in corporate capacity. The rights of property as exercised by corporations vary somewhat from the rights of property of individuals, for in all corporations we find that the majority rule; while the members associate themselves in a group under contract to carry out different kinds of work, they also agree to submit to whatever policy is adopted by the majority or the policy of the states making the corporate laws. Also, the extension of powers granted these corporations by the states gives them superior rights, such as the right of eminent domain and the income arising therefrom. The ownership of public property is manifest through what are known as political corporations, the general policy of the state being to manage the property for the people at large. Here, then, we have a variety of ownership which has grown up through custom, and its authority and right need not be questioned. The only facts to be observed are, as to whether there is a definite description of the property, and whether a legal title can be shown to give to it all the rights and privileges of ownership. The right of property cannot be rationally questioned, although many people who attempt to carry out their socialistic theory and deny the right of interest in order to maintain their position are forced to deny the right of property in their attempt to defend their absurd position.

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173. **Monopoly Privileges.** — There are, however, certain monopoly privileges granted by the state, which also interfere very much with the distribution of wealth. These are generally in the form of patent rights, copyrights, trade-marks, and franchises. They are sometimes called artificial monopolies, because they are created by the state. They are not a source of wealth or a means of production, but merely an exclusive control given by the government over certain enterprises, the entire profits of which may be directed into the hands of one who owns the right or privilege. But as these may be bought and sold, from the personal standpoint of the distribution of wealth they are property rights.

There is another group of monopolies, that arise out of the condition of modern industrial society. These are sometimes called natural monopolies, because the monopoly power arises out of economic conditions; although the line of division is not strongly marked between them and artificial monopolies, for indeed every natural monopoly receives the sanction of the government by the means of a franchise which makes it rely in part upon the state for its existence. Land, in so far as it is a monopoly, belongs to this class, and such great enterprises as railways, waterworks, tramways, gas works, telegraphs, etc., are classified in this group. Also, the modern manufacturing industries which have grown into gigantic corporations and trusts have derived such a momentum of power and mastery over conditions as to be practically monopolies. In all monopolies the power to limit the supply of products on account of the absence of competition gives an exclusive privilege to a